

KATHOLIEKE UNIVERSITEIT LEUVEN  
CENTRE INTERNATIONAL DE DIALECTOLOGIE GÉNÉRALE

# ORBIS

Bulletin international de documentation linguistique

*Fondé en 1952 et dirigé de 1952 à 1960 par*  
SEVER POP

*dirigé de 1960 à 1985 par*  
A.J. VAN WINDEKENS

*Édité par*  
R. BOSTEELS, L. ISEBAERT et P. SWIGGERS

---

Tome XXXVIII 1995

---

EXTRAIT

*Publié avec le concours de la Fondation universitaire de Belgique*

LOUVAIN  
CENTRE INTERNATIONAL DE DIALECTOLOGIE GÉNÉRALE

Rédaction  
Blijde-Inkomststraat 21  
B-3000 Leuven

# ORBIS

## Bulletin international de documentation linguistique

*Orbis* is the official organ of the "Centre international de Dialectologie générale", founded in 1952 by Sever Pop. Since its inception the journal has served as a forum for scholarly discussion and as a receptacle of information on all aspects of the language sciences. In conformity with its initial aims *Orbis* will accept contributions not only in the field of dialect study, but also in those of general linguistics, synchronic, diachronic and comparative language description, language typology, and the socio-cultural study of languages. Moreover, the journal will remain faithful to its bibliographical orientation, as well as to its interest in the history of the language sciences. State-of-the-art reports and surveys of trends or topics will receive their due place in the journal.

*Orbis* is open to linguistic scholars all over the world and will accept papers in one of the following languages: English, French, German, Italian, and Spanish. Contributions should conform to the general style sheet (see inside back cover). Articles submitted for publication will be examined within two months of receipt. Contributors will receive 25 free offprints of their contributions.

Manuscripts, correspondence, exchange copies of journals, and books for review should be sent to

**Orbis (Editorial Board)**  
**Faculty of Letters**  
**Blijde-Inkomststraat 21**  
**B-3000 Leuven**  
**BELGIUM**

Orders for publications and correspondence relating to subscriptions should be sent to Éditions Peeters, Bondgenotenlaan 153, B-3000 Leuven.

Editorial Board/Comité de rédaction: R. Bosteels, L. Isebaert, P. Swiggers.

Editorial assistant/Secrétaire de rédaction: H. Seldeslachts.

# HISTORICAL-COMPARATIVE LINGUISTICS LINGUISTIQUE HISTORICO-COMPARATIVE

## SOME NOSTRATIC ETYMOLOGIES: SUPPLEMENT I

### 1. *Introduction*

In my recently-published joint monograph with John C. KERNS entitled *The Nostratic Macrofamily: A Study in Distant Linguistic Relationship* (BOMHARD - KERNS 1994), I listed and discussed 601 possible Nostratic etymologies. Since writing this book, my research has continued, and, as a result, I have changed my mind about a small number of the etymologies listed in the book, and I have accumulated material for new etymologies.

In this paper, I would like to present a number of additional Nostratic etymologies. First, however, I will begin by giving a brief introduction to the basic assumptions made in my book.

### 2. *The Nostratic Languages*

One large-scale grouping of languages that has been proposed at various times and by various scholars is the so-called “Nostratic” macrofamily — the name “Nostratic” was first suggested by Holger PEDERSEN in 1903 (it is derived from Latin *nostrās* “our countryman”). Though the “Nostratic Hypothesis” has occupied the efforts of a handful of scholars from time to time, for the most part, it has been ignored by most scholars — the early work done was simply not of high quality and, therefore, was not convincing. However, beginning in the early 1960’s, interest in the Nostratic Hypothesis was revived by the work of two Russian scholars, namely, V.M. ILLICH-SVITYCH and A.B. DOLGOPOLSKY, who first started working independently and, at a later date, through the efforts of Vladimir DYBO, cooperatively. Their work, though not without its own shortcomings (see below, § 4), was the first successful demonstration that certain language phyla of northern and central Eurasia, as well as the ancient Near East, might be genetically related. Following PEDERSEN, they employed the name “Nostratic” to designate this grouping of languages. In particular, ILLICH-SVITYCH, in the course of several publications, culminating in his posthumous comparative dictionary, which is still in the process of publication, included Indo-European, Kartvelian, Afroasiatic, Uralic, Dravidian, and Altaic in his version of the Nostratic



macrofamily. From his very earliest writings, DOLGOPOLSKY also included Chukchi-Kamchatkan.

The following evidence provides the basis for setting up a Nostratic macrofamily: (1) First and foremost, the descendant languages can be shown to share a large common vocabulary. In an article published in 1965, ILLICH-SVITYCH listed 607 possible common Nostratic roots, but only 378 have been published to date in his posthumous comparative Nostratic dictionary. It should be noted that there are differences between the etymologies proposed in 1965 and the items included in the later dictionary: first, some of the items listed in 1965 do not appear in the dictionary; next, minor changes have been made to several of the earlier etymologies. DOLGOPOLSKY currently claims to have approximately 2,000 common Nostratic roots, but only a little of this material has been published to date. In the joint monograph by myself and John C. KERNS (BOMHARD - KERNS 1994), I supply a great deal of lexical material (approximately 25,000 cited forms) from the Nostratic daughter languages to support 601 common Nostratic roots. It should be mentioned here as well that Joseph GREENBERG is currently preparing a two-volume work entitled *Indo-European and Its Closest Relatives: The Eurasiatic Language Family*, in which a large amount of lexical material will be discussed, though GREENBERG's Eurasiatic is not the same as Nostratic. (2) As is to be expected, the various branches of Nostratic investigated to date exhibit regular sound correspondences (see Chart 1 for details), though, it should be mentioned, there are differences in interpretation between ILLICH-SVITYCH and DOLGOPOLSKY on the one hand and myself on the other. (3) Finally, a moderate number of common grammatical formants have been recovered.

Notable among the lexical items uncovered by ILLICH-SVITYCH, DOLGOPOLSKY, and myself is a solid core of common pronominal stems. These pronominal stems have particular importance, since, as forcefully demonstrated by John C. KERNS (1985: 9-50), pronouns, being among the most stable elements of a language, are a particularly strong indicator of genetic relationship (RUHLEN 1994: 92-93 makes the same point). KERNS (1985: 48) concludes (the emphasis is his):

The results are overwhelming. We are forced to conclude that the pronominal agreements between Indo-European and Uralic, between Uralic and Altaic, and between Indo-European and Altaic, did not develop independently, but instead were CAUSED by some UNIQUE historical circumstance. In short, it is extremely unlikely that the three pronominal systems could have evolved independently.

The conclusion seems inescapable that the consistent, regular phonological correspondences that can be shown to exist among the Nostratic descendant languages as well as the agreements in vocabulary (that is,

cognates) and grammatical formants that have been uncovered to date cannot be explained as due to linguistic borrowing but can only be accounted for in terms of common origin, that is, genetic relationship. To assume any other possibility would be to stretch credibility beyond reasonable bounds and would be tantamount to denying the efficacy of the Comparative Method. At this point, it is worth quoting what SCHWINK (1994: 1-2) has to say about the criteria upon which genetic relationship is established (the emphasis is his) (see also below § 3):

A variety of languages are considered to be genetically related because of enough regular agreement in elements of *signifié* and *signifiant* to preclude the workings of coincidence [...] The relationship of sign to meaning is for the most part arbitrary. Exceptions to this precept include onomatopoeic vocabulary etc. If these exceptions as well as borrowed material are eliminated and two or more languages still show a high degree of *regular* agreement in their signs, i.e. homomorphism, then the nature of the linguistic sign rules out mere chance. The number of homomorphisms should be significantly high and one should be able to quantify this significance [...] RINGE (1992) has recently carried out a study which does this by quantifying the amount of phonological similarity which is statistically relevant in determining a genetic relationship. RINGE's method is extremely important for the discussion of distant relationships, however, no one would deny that the degree of homomorphism in the Indo-European languages is more than high enough to assume intuitively a genetic relationship.

This does not mean that all problems have been solved. On the contrary, Nostratic studies are still in their infancy, and there remain many issues to be investigated and many details to be worked out, but the future looks extremely exciting and extremely promising.

We may now address the problem of subgrouping. Joseph H. GREENBERG has proposed setting up a Eurasiatic language family that includes Indo-European, Uralic-Yukaghir, Altaic (Mongolian, Chuvash-Turkic, and Manchu-Tungus), Japanese-Korean (Korean, Ainu, and Japanese-Ryukyuan), and Chukchi-Eskimo (Gilyak, Chukchi-Kamchatkan, and Eskimo-Aleut). He does not include Kartvelian, Afroasiatic, nor Elamo-Dravidian — not because he believes that they are unrelated, but because he believes that these three language phyla are more distantly related to Indo-European than are the others, which, along with Indo-European, form a natural taxonomic grouping. My own opinion is close to that of GREENBERG. As I see the situation, Nostratic includes Afroasiatic, Kartvelian, and Dravidian as well as Eurasiatic, in other words, I view Nostratic as a higher-level taxonomic entity. Afroasiatic stands apart as an extremely ancient, independent branch — it was the first branch of Nostratic to develop its own separate identity. Younger are Kartvelian and Elamo-Dravidian. In terms of their vocabulary,

pronominal stems, and morphological systems, Indo-European, Uralic-Yukaghir, Altaic, Gilyak, Chukchi-Kamchatkan, and Eskimo-Aleut are more closely related as a group than any one of them is to Afroasiatic, Kartvelian, and Elamo-Dravidian, and this is the reason that I follow GREENBERG in setting up a distinct Eurasiatic subgroup within Nostratic. Finally, Sumerian, if it really does belong here, is a separate branch, possibly closest to Elamo-Dravidian. An attempt at subgrouping is shown in Chart 2 (this is very close to the schema proposed by RUHLEN [1994: 192]). The early dispersal of the Nostratic languages is depicted in Chart 3.

### 3. *Methodology*

Though I have repeated the following points verbatim many times in previous papers, I still read irresponsible statements being made in the literature to the effect that Nostraticists do not use “traditional methods” or that they use a “weakened form” of the Comparative Method. Nothing could be farther from the truth. Therefore, I will once again state verbatim the methodological principles I have used.

The approach to language comparison that I have followed in attempting to establish genetic relationship among the various Nostratic languages is derived, in part, from that advocated by Joseph H. GREENBERG in the chapter entitled “Genetic Relationship among Languages” in his 1957 book *Essays in Linguistics* and, in part, from traditional methods of comparison and internal reconstruction. In my opinion, the combination of GREENBERG’s methodology and more traditional methods of comparison can inform and further one another. The principles established by GREENBERG are as follows:

GREENBERG notes that the only way to establish hypotheses about genetic relationship is by comparing languages. However, the problem is in knowing which languages to compare and in knowing what to compare since not all aspects of language are equally relevant to comparison. To be meaningful, comparison must strive to eliminate chance resemblances and to separate borrowings from native elements. This is often easier said than done; however, GREENBERG lays out two main techniques for detecting borrowed lexical items. First, he notes that borrowing is commonly confined to certain semantic spheres (for example, cultural items) and certain grammatical categories (nouns far more often than verbs). Second, borrowed words can be distinguished from native vocabulary by expanding the range of comparison to include additional languages.

The simplest way to establish genetic relationship is by identifying a large number of similar morphs (or allomorphs) — especially irregularities — in similar environments in the languages being considered.

Another significant indicator of probable genetic relationship is the presence of similar rules of combinability. Unfortunately, historical processes over the passage of time bring about the gradual transformation and eventual elimination of such similarities. The longer the period of separation, the lesser the chances will be that similarities of morphological forms and rules of combinability will be found.

Fortunately, there remain other factors that can be helpful in determining possible genetic relationship. One significant factor is the semantic resemblance of lexical forms. Here, it is important to be able to establish recurrent sound-meaning correspondences for a reasonably large sample of lexical material. Lexical forms with identical or similar meanings have the greatest value. Next in value come forms that, though divergent in meaning, can convincingly be derived, through widely-attested semantic shifts, from earlier forms of identical or similar meaning. The chances that lexical resemblances indicate genetic relationship increase dramatically when additional languages are brought into the comparison and when these new languages also exhibit a very large number of recurrent sound-meaning correspondences. GREENBERG has termed this method "mass comparison" (more recently, he has used the term "multilateral comparison"). He considers the comparison of basic vocabulary from a large number of languages from a specific, wide geographic area to be the quickest and most certain method to determine possible genetic relationship. To GREENBERG, lexical data are of paramount importance in attempting to establish genetic relationship among languages, especially in the initial stages of comparison.

The basic principles underlying the Comparative Method may be summarized as follows: The first step involves the arduous task of data gathering. Once a large amount of lexical material has been gathered, it must be carefully analyzed to try to separate what is ancient from what is an innovation and from what is a borrowing. After the native lexical elements have been reasonably identified in each phylum, the material can be compared across phyla to determine sound correspondences. Not only must the regular sound correspondences (that is, those that occur consistently and systematically) be defined, exceptions must also be explained. Here, widely-attested sound changes (palatalization, metathesis, syncope, assimilation, dissimilation, etc.) provide the key to understanding the origin of most exceptions. In other cases, the analysis of the influence that morphology has exerted provides an understanding of how particular exceptions came into being. Some exceptions, though clearly related, simply defy explanation. All of these must be noted. The final step involves the reconstruction of ancestral forms and the formulation of the sound laws leading to the forms in the descendant languages, identifying the laws that have produced the regular sound

correspondences as well as the exceptions. The same principles apply to the reconstruction of grammatical forms and rules of combinability and to the identification of the historical transformations leading to the systems found in the daughter languages. Here, we may note that the description of the Comparative Method and Internal Reconstruction given by SCHWINK (1994: 9) is virtually identical to the procedure outlined in this paragraph.

As noted in the first paragraph, it was necessary to discuss these issues in order to address concerns that have been raised about the applicability of traditional methods of comparison to long-range comparison. It must be made perfectly clear that the same principles are just as applicable to long-range comparison as they are to any other type of linguistic comparison. The fact is, these are the only tools we have. Moreover, they work — their efficacy has been proven over and over again.

Furthermore, claims that these methodologies break down when one tries to apply them beyond a certain time limit, say 5,000 to 10,000 years ago, can be shown, without a shadow of doubt, to be false. One can cite, for example, the case of the aboriginal languages of Australia. Archaeological evidence indicates that Australia has been inhabited by human beings for approximately 40,000 years. Though there remain many unsettled questions, such as exactly when Proto-Australian was spoken (probably at least 30,000 years ago), or about how the different languages should be subgrouped, and so on, there can be no question that all extant languages belong to the same family (cf. RUHLEN 1987: 188), and comparative work on these languages is continuing apace. Another example that can be cited is the case of the Afroasiatic language family. Due to the extremely deep divisions among the six branches of Afroasiatic (Semitic, Egyptian, Berber, Omotic, Cushitic, and Chadic), which are far greater than those found, by way of comparison, among the earliest attested branches of Indo-European, the Afroasiatic parent language must be placed as far back as 10,000 BCE, or perhaps even earlier, according to some scholars. This extremely ancient date notwithstanding, the major sound correspondences have been determined with great accuracy, excellent progress is being made in reconstructing the common lexicon, and scholars are beginning to piece together the original morphological patterning, though progress here lags behind other areas.

In attempting to determine whether or not particular lexical items from the various language families might be related, I have made extensive use of Carl Darling BUCK's *A Dictionary of Selected Synonyms in the Principal Indo-European Languages* as a control for the semantic development of the proposed lexical parallels. It may be noted that, in



examining the lexicons of Kartvelian, Afroasiatic, Uralic-Yukaghir, Elamo-Dravidian, Altaic, and Sumerian, I have observed that semantic shifts similar to those described by BUCK for the Indo-European languages are found over and over again in these other language families as well.

#### 4. *Critique of Moscovite Views on Nostratic*

Let me begin by stating unequivocally that I have the highest admiration for what Moscovite scholarship (especially the work of V.M. ILLICH-SVITYCH and A.B. DOLGOPOLSKY — some of the work done by other Russian scholars is not on the same level) on Nostratic has achieved. Their research has opened up new and exciting possibilities and given Nostratic studies new respectability. However, this does not mean that I agree with everything they say. I regard their work as a pioneering effort and, as such, subject to modification in light of advances in linguistic theory, in light of new data from the Nostratic daughter languages, and in light of findings from typological studies that give us a better understanding of the kind of patterning that is found in natural languages as well as a better understanding of what is characteristic of language in general, including language change.

Let us begin by looking at phonology: In 1972 and 1973, the Georgian scholar Thomas V. GAMKRELIDZE and the Russian scholar Vjačeslav V. IVANOV jointly proposed a radical reinterpretation of the Proto-Indo-European stop system. According to their reinterpretation, the Proto-Indo-European stop system was characterized by the three-way contrast glottalized ~ voiceless (aspirated) ~ voiced (aspirated). In this revised interpretation, aspiration is viewed as a redundant feature, and the phonemes in question could also be realized as allophonic variants without aspiration. A similar proposal was made by Paul J. HOPPER at the same time.

This new interpretation opens new possibilities for comparing Proto-Indo-European with the other Nostratic daughter languages, especially Proto-Kartvelian and Proto-Afroasiatic, each of which had a similar three-way contrast. The most natural assumption would be that the glottalized stops posited by GAMKRELIDZE and IVANOV for Proto-Indo-European would correspond to glottalized stops in Proto-Kartvelian and Proto-Afroasiatic, while the voiceless stops would correspond to voiceless stops and voiced stops to voiced stops. This, however, is quite different from the correspondences proposed by ILLICH-SVITYCH. He sees the glottalized stops of Proto-Kartvelian and Proto-Afroasiatic as corresponding to the traditional plain voiceless stops of Proto-Indo-European, while the voiceless stops in the former two branches are seen

as corresponding to the traditional plain voiced stops of Proto-Indo-European, and, finally, the voiced stops to the traditional voiced aspirates of Proto-Indo-European. ILLICH-SVITYCH then reconstructs the Proto-Nostratic phonological system on the model of Kartvelian and Afroasiatic, with the three-way contrast glottalized ~ voiceless ~ voiced in the series of stops and affricates.

The mistake that ILLICH-SVITYCH made was in trying to equate the glottalized stops of Proto-Kartvelian and Proto-Afroasiatic with the traditional plain voiceless stops of Proto-Indo-European. His reconstruction would make the glottalized stops the least marked members of the Proto-Nostratic stop system. ILLICH-SVITYCH's reconstruction is thus in contradiction to typological evidence, according to which glottalized stops are uniformly the most highly marked members of a hierarchy. The reason that ILLICH-SVITYCH's reconstruction would make the glottalized stops the least marked members is as follows: ILLICH-SVITYCH posits glottalics for Proto-Nostratic on the basis of one or two seemingly solid examples in which glottalics in Proto-Afroasiatic and/or Proto-Kartvelian appear to correspond to traditional plain voiceless stops in Proto-Indo-European. On the basis of these examples, he assumes that, whenever there is a voiceless stop in the Proto-Indo-European examples he cites, a glottalic is to be reconstructed for Proto-Nostratic, even when there are no glottalics in the corresponding Kartvelian and Afroasiatic forms! This means that the Proto-Nostratic glottalics have the same frequency distribution as the Proto-Indo-European plain voiceless stops. Clearly, this cannot be correct. The main consequence of ILLICH-SVITYCH's mistaken equation of the glottalized stops of Proto-Kartvelian and Proto-Afroasiatic with the traditional plain voiceless stops of Proto-Indo-European is that he is led to posit forms for Proto-Nostratic on the basis of theoretical considerations but for which there is absolutely no evidence in any of the Nostratic daughter languages.

What about those examples adduced by ILLICH-SVITYCH which appear to support his proposed correspondences? Some of these examples admit alternative explanations, while others are questionable from a semantic point of view and should be abandoned. Once these examples are removed, there is an extremely small number (no more than a handful) left over that appear to support his position. However, compared to the massive counter-evidence in which glottalized stops in Kartvelian and Afroasiatic correspond to similar sounds (the traditional plain voiced stops) in Proto-Indo-European, even these residual examples become suspect (they may be borrowings or simply false cognates).

Another major shortcoming is in ILLICH-SVITYCH's reconstruction of the Proto-Nostratic vowel system, which, according to him, is essentially that of modern Finnish. It simply stretches credibility beyond reasonable

bounds to assume that the Proto-Nostratic vowel system could have been preserved unchanged in Finnish, especially considering the many millennia that must have passed between the dissolution of the Nostratic parent language and the emergence of Finnish. No doubt, this erroneous reconstruction came about as a result of ILLICH-SVITYCH's failure to deal with the question of subgrouping. The Uralic-Yukaghir phylum, of which Finnish is a member, belongs to the Eurasiatic branch of Nostratic. Now, Eurasiatic is several millennia younger than Afroasiatic, which appears to be the oldest branch of the Nostratic macrofamily. Therefore, Afroasiatic must play a key role in the reconstruction of the Proto-Nostratic vowel system, and the Uralic-Yukaghir vowel system must be considered a later development that cannot possibly represent the original state of affairs.

### 5. *Indo-European*

The Neogrammarian reconstruction of the Proto-Indo-European phonological system, which was arrived at through strict adherence to the doctrine that sound laws admit no exceptions, was notable for its large inventory of stops and its extremely small inventory of fricatives. The stop system was based upon the example of Old Indo-Aryan and consisted of a four-way contrast of (1) plain voiceless stops, (2) voiceless aspirates, (3) plain voiced stops, and (4) voiced aspirates (cf. BRUGMANN 1904: 52), thus:

	1	2	3	4
Labial:	<i>p</i>	<i>ph</i>	<i>b</i>	<i>bh</i>
Dental:	<i>t</i>	<i>th</i>	<i>d</i>	<i>dh</i>
Palatal:	<i>ĥ</i>	<i>ĥh</i>	<i>ĝ</i>	<i>ĝh</i>
Velar:	<i>q</i>	<i>qh</i>	<i>g</i>	<i>gh</i>
Labiovelar:	<i>qʰ</i>	<i>qʰh</i>	<i>gʰ</i>	<i>gʰh</i>

The Neogrammarians also reconstructed five short vowels and five long vowels plus a reduced vowel, the so-called "*schwa primum*", which alternated with so-called "original" long vowels. A full set of diphthongs was posited as well. Finally, the system contained the semi-vowels *\*j* and *\*u*, a series of nasals, and the liquids *\*l* and *\*r*. The nasals and liquids could function as syllabics as well as non-syllabics, depending upon their environment.

The Proto-Indo-European vowels were subject to various alternations that were partially correlated with the positioning of the accent within a word. These vowel alternations served to indicate different types of grammatical formations. The most common alternation was the

interchange between the vowels *\*e* and *\*o* in a given syllable. There was also an alternation among lengthened-grade vowels, normal-grade vowels, and reduced- and/or zero-grade vowels.

The Neogrammarians posited voiceless aspirates for Proto-Indo-European on the basis of an extremely small, and somewhat controversial, set of correspondences from Indo-Iranian, Armenian, and Greek. In the other daughter languages, the voiceless aspirates and plain voiceless stops have the same treatment, except that *\*kh* became *x* in Slavic. In this century, however, a great many linguists have concluded that the traditional voiceless aspirates should not be reconstructed for the Indo-European parent language but, rather, should be considered as secondary formations in the daughter languages where distinct reflexes are found. In particular, it has been shown that many of the examples of voiceless aspirates in the daughter languages can be convincingly derived from earlier sequences of plain voiceless stop plus a following laryngeal. The removal of the traditional voiceless aspirates from the Proto-Indo-European phonological system results in a stop system with a three-way contrast of (1) plain voiceless stops, (2) plain voiced stops, and (3) voiced aspirates. Such a reconstruction creates a problem from a typological point of view, since data collected from the study of a great number of the world's languages have failed to turn up any systems in which voiced aspirates are added to the pair "plain voiceless stop" / "plain voiced stop" unless there are also corresponding voiceless aspirates in the system. That is to say, such a reconstruction violates certain markedness principles (SCHWINK [1994: 61-62, § 3.1.4.2] makes the same point).

There are a number of other disturbing problems with the traditional reconstruction: First, most of the standard handbooks comment on the fact that there are extremely few, if any, unambiguous examples of the voiced bilabial stop *\*b* that can be reconstructed for Proto-Indo-European. The statistically low frequency of occurrence (perhaps even total absence) of this sound cannot be satisfactorily explained within the traditional framework. Another problem concerns the fact that the traditional plain voiced stops are rarely found in inflectional affixes or in pronouns. The final problem concerns the unexplained constraint against the cooccurrence of two plain voiced stops in a root.

It was in trying to find a solution for these problems in particular that Thomas V. GAMKRELIDZE, Paul J. HOPPER, and Vjačeslav V. IVANOV were led in the early 1970's to consider the possibility that the traditional plain voiced stops might have been glottalics. Basing their arguments on typological considerations, they observed that the patterning of the plain voiced stops exhibited many of the typological characteristics of glottalics.

In addition, GAMKRELIDZE and IVANOV suggested that the traditional voiceless stops be reinterpreted as voiceless aspirates. They made no changes to the traditional voiced aspirates, however. In this revised interpretation, aspiration is viewed as a redundant feature, and the phonemes in question could also be realized as allophonic variants without aspiration. These revisions provide typologically natural explanations for the problems mentioned above, specifically: (A) by reinterpreting the traditional plain voiced stops as voiceless aspirates, there is no longer a problem, from a typological point of view, with positing a series of voiced aspirates, since the imbalance caused by the removal of the traditional voiceless aspirates is eliminated; (B) reinterpretation of the traditional plain voiced stops as glottalics easily accounts for the statistically low frequency of occurrence of the traditional plain voiced bilabial stop (which becomes a bilabial ejective in the revised system) since the bilabial member is always characterized by a low frequency of occurrence (there quite often being a total absence at this point of articulation) in attested languages having ejectives; (C) in such languages, it is common for ejectives to be excluded from inflectional affixes and pronouns; and (D) many languages with ejectives have a constraint against the cooccurrence of two ejectives in a root. Moreover, the revisions proposed by GAMKRELIDZE, HOPPER, and IVANOV provide new insights into the underlying principles governing GRASSMANN'S Law and BARTHOLOMAE'S Law. Finally, it may be noted that strong support for the changes proposed by GAMKRELIDZE, HOPPER, and IVANOV is to be found in Germanic, Armenian, and perhaps (the poorly-attested) Thracian and Phrygian. According to the traditional interpretation, these languages had been thought to have undergone "sound shifts" (*Lautverschiebungen*). Under the revised interpretation, however, they are seen as relic areas.

In 1878, the young Ferdinand DE SAUSSURE attempted to show that so-called "original" long vowels were to be derived from earlier sequences of short vowel plus a following "coefficient sonantique". In 1927, Jerzy KURYŁOWICZ demonstrated that reflexes of DE SAUSSURE'S "coefficients sonantiques" were preserved in Hittite. On this basis, a series of consonantal phonemes, commonly called "laryngeals", was then posited for Proto-Indo-European. KURYŁOWICZ, in particular, set up four laryngeals, which he writes  $*_{21}$ ,  $*_{22}$ ,  $*_{23}$ ,  $*_{24}$ . Other scholars, however, operate with as few as one or as many as twelve laryngeals. The laryngeals may be assigned the following phonetic values:

- $*_{21}$  = Glottal stop /ʔ/
- $*_{22}$  = Voiceless and voiced multiply-articulated pharyngeal/laryngeal fricatives /ħh/ and /ʕʕ/



- \*<sub>23</sub> = Voiceless and voiced multiply-articulated pharyngeal/laryngeal fricatives /ħħ/ and /ʕʕ/  
 \*<sub>24</sub> = Voiceless glottal fricative /h/

The Proto-Indo-European phonological system may be reconstructed as follows:

OBSTRUENTS:

<i>p</i> <sup>[h]</sup>	<i>t</i> <sup>[h]</sup>	<i>k</i> <sup>[h]</sup>	<i>k</i> <sup>w</sup> <sup>[h]</sup>
<i>b</i> <sup>[h]</sup>	<i>d</i> <sup>[h]</sup>	<i>g</i> <sup>[h]</sup>	<i>g</i> <sup>w</sup> <sup>[h]</sup>
( <i>p</i> <sup>'</sup> )	<i>t</i> <sup>'</sup>	<i>k</i> <sup>'</sup>	<i>k</i> <sup>w</sup> <sup>'</sup>
	<i>s</i>		

LARYNGEALS:

ʔ	<i>h</i>	<i>ħħ</i>
		<i>ʕʕ</i>

NASALS AND LIQUIDS:

<i>m</i> / <i>m̥</i>	<i>n</i> / <i>n̥</i>	<i>l</i> / <i>l̥</i>	<i>r</i> / <i>r̥</i>
----------------------	----------------------	----------------------	----------------------

GLIDES:

<i>y</i>	<i>w</i>
----------	----------

VOWELS:

<i>e</i>	<i>o</i>	<i>a</i>	<i>i</i>	<i>u</i>	<i>ə</i>
<i>ē</i>	<i>ō</i>	<i>ā</i>	<i>ī</i>	<i>ū</i>	

Morphologically, Proto-Indo-European was a highly inflected language. For nouns and adjectives, three genders, three numbers, and as many as eight cases have been reconstructed, though it is doubtful that all of these features were ancient; it is indeed possible to discern several chronological layers of development. The traditional reconstruction of the Proto-Indo-European verbal system sets up two voices, four moods, and as many as six tenses. Syntactically, Proto-Indo-European seems to have had many of the characteristics of an SOV language, though there must, no doubt, have been a great deal of flexibility in basic word order patterning. Finally, it may be noted that root structure patterning is extremely close to what is posited for Proto-Kartvelian.

## 6. Kartvelian (South Caucasian)

Proto-Kartvelian had a rich system of stops, affricates, and fricatives. Each stop and affricate series was characterized by the three-way contrast (1) voiceless (aspirated), (2) voiced, and (3) glottalized. Thomas

V. GAMKRELIDZE and Givi MACHAVARIANI (1982) reconstruct three separate series of affricates and fricatives, namely, a front series, a mid series, and a back series, but Karl Horst SCHMIDT (1962) reconstructs only two. It is the views of GAMKRELIDZE and MACHAVARIANI that are followed in this paper. KLIMOV (1964) also follows GAMKRELIDZE and MACHAVARIANI.

Proto-Kartvelian also had a series of resonants, which could function as syllabics as well as nonsyllabics, depending upon their environment. The patterning is strikingly similar to what is assumed to have existed in Proto-Indo-European.

Three short vowels and three long vowels are usually reconstructed for Proto-Kartvelian. As in Proto-Indo-European, the vowels underwent various ablaut changes. These alternations served to indicate different types of grammatical formations. The most common alternation was the interchange between the vowels *\*e* and *\*a* in a given syllable. There was also an alternation among lengthened-grade vowels, normal-grade vowels, and reduced- and/or zero-grade vowels.

The Proto-Kartvelian phonological system may be reconstructed as follows:

#### OBSTRUENTS:

<i>p</i> <sup>[h]</sup>	<i>t</i> <sup>[h]</sup>	<i>c</i> <sup>[h]</sup>	<i>c</i> <sup>[h]</sup> <sub>1</sub>	<i>č</i> <sup>[h]</sup>	<i>k</i> <sup>[h]</sup>	<i>q</i> <sup>[h]</sup>	
<i>b</i>	<i>d</i>	<i>z</i>	<i>z</i> <sub>1</sub>	<i>ž</i>	<i>g</i>	<i>g</i>	
<i>p'</i>	<i>t'</i>	<i>c'</i>	<i>c'</i> <sub>1</sub>	<i>č'</i>	<i>k'</i>	<i>q'</i>	
		<i>s</i>	<i>s</i> <sub>1</sub>	<i>š</i>	<i>x</i>		<i>h</i>
		<i>z</i>	<i>z</i> <sub>1</sub>	( <i>ž</i> )	<i>γ</i>		

#### RESONANTS:

<i>m</i> / <i>m̃</i>	<i>n</i> / <i>ñ</i>	<i>l</i> / <i>l̃</i>	<i>r</i> / <i>r̃</i>	<i>y</i> / <i>i</i>	<i>w</i> / <i>u</i>
----------------------	----------------------	----------------------	----------------------	---------------------	---------------------

#### VOWELS:

<i>e, ē</i>	<i>o, ō</i>	<i>a, ā</i>
-------------	-------------	-------------

The Kartvelian languages are all highly inflected; Georgian, for example, has six basic grammatical cases plus eleven secondary cases. Nominal declension distinguishes between ergative and absolutive case forms; the ergative case is used to mark the subject of transitive verbs, while the absolutive case is used to mark direct objects and the subject of intransitive verbs. It is the dative case, however, that is used to mark the subject of so-called "inverted verbs". There are several other departures from canonical ergative-type constructions, so much so in Mingrelian, for instance, that this language no longer possesses any true ergative features. Adjectives normally precede the nouns they modify.

Postpositions are the rule. Verb morphology is particularly complicated — for example, DEETERS lists eleven functional elements that may be arrayed around a given verb root, though they may not all appear simultaneously.

Syntactically, the predominant word order is SOV, though SVO is not uncommon.

### 7. *Afroasiatic*

The Afroasiatic family consists of six separate branches: Semitic, Berber, Egyptian (now extinct), Cushitic, Omotic, and Chadic. Some languages (Akkadian and Egyptian, for example) have literary traditions going back many millennia, while some contemporary languages (especially Chadic languages) are barely known, let alone documented.

There are still many uncertainties regarding the reconstruction of the Proto-Afroasiatic phonological system, the sibilants being particularly troublesome. In general, I have followed the views of André MARTINET (1975 [1953]: 248-261), David COHEN (1968: 1299-1306), and Igor M. DIAKONOFF (1992: 5-35), though I have made minor adjustments to their proposals (for example, the addition of a series of palatalized velars) on the basis of my own research.

One of the most notable characteristics of Afroasiatic consonantism is the system of triads found in the stops and affricates — each series (except the lateralized affricates) is composed of three contrasting members: (1) voiceless (aspirated), (2) voiced, and (3) glottalized (that is, ejectives — these are the so-called “emphatics” of Semitic grammar). The lateralized affricate series probably lacked a voiced member. Another significant characteristic is the presence of a glottal stop, a voiceless laryngeal fricative, and voiced and voiceless pharyngeal fricatives. Proto-Afroasiatic may also have had a series of postvelars.

According to DIAKONOFF (1975: 134-136), Proto-Afroasiatic had a vertical vowel system of \**a* and \**a* as well as a series of syllabic resonants. In my opinion, the evidence from the non-Semitic branches of Afroasiatic does not appear to support the reconstruction of syllabic resonants for Proto-Afroasiatic. Proto-Afroasiatic seems not to have had long vowels.

The Proto-Afroasiatic phonological system may tentatively be reconstructed thus:

#### STOPS AND AFFRICATES:

<i>p</i> <sup>[h]</sup>	<i>t</i> <sup>[h]</sup>	<i>c</i> <sup>[h]</sup>	<i>pʰ</i> <sup>[h]</sup>	<i>tʃ</i> <sup>[h]</sup>	<i>kʰ</i> <sup>[h]</sup>	<i>k</i> <sup>[h]</sup>	<i>kʷ</i> <sup>[h]</sup>	( <i>q</i> <sup>[h]</sup> )
<i>b</i>	<i>d</i>	<i>ʒ</i>	<i>dʲ</i>		<i>gʲ</i>	<i>g</i>	<i>gʷ</i>	( <i>ɠ</i> )
<i>pʻ</i>	<i>tʻ</i>	<i>cʻ</i>	<i>tʻʲ</i>	<i>tʃʻ</i>	<i>kʻʲ</i>	<i>kʻ</i>	<i>kʻʷ</i>	( <i>qʻ</i> ) ?

## FRICATIVES:

<i>f</i>	<i>s</i>	<i>sʸ</i>	<i>h</i>	<i>ħ</i>
				<i>ʕ</i>

## GLIDES:

<i>w</i>	<i>y</i>
----------	----------

## NASALS AND LIQUIDS:

<i>m</i>	<i>n</i>	<i>l</i>	<i>r</i>
----------	----------	----------	----------

## VOWELS:

<i>ə</i>
<i>a</i>

Proto-Afroasiatic was most likely highly inflected. It is simply not possible, however, given the present level of knowledge, to reconstruct the morphological structure of the parent language in detail, though some common features (such as the distinction of grammatical gender and the existence of two verbal conjugational systems, at least one of which [the prefix conjugation] probably goes back to Proto-Afroasiatic) have been noted. Syntactically, the classical Semitic languages, Egyptian, and the Berber languages are VSO, the majority of Cushitic languages are SOV, and most Chadic languages are SVO.

### 8. *Root Structure Patterning in Afroasiatic*

It is necessary to be quite clear concerning my assumptions regarding root structure patterning in Proto-Afroasiatic, because the assumptions I have made here are critical to the viability of the lexical comparisons I have made between Afroasiatic and the other language families considered in this paper. My assumptions are as follows (cf. DIAKONOFF 1975; EHRET 1989b: 109-202):

1. There were no initial vowels in the earliest form of Proto-Afroasiatic. Therefore every root began with a consonant.
2. Originally, there were no initial consonant clusters either. Consequently, every root began with one and only one consonant.
3. Two basic syllable types existed: (A) \*CV and (B) \*CVC, where *C* = any non-syllabic and *V* = any vowel. Permissible root forms coincided with these two syllable types.
4. A verb stem could either be identical with a root or it could consist of a root plus a single derivational morpheme added as a suffix to the root: \*CVC-VC-. Any consonant could serve as a suffix.

5. Primary (that is, non-derivational) noun stems displayed similar patterning, though, unlike verb stems, they were originally characterized by stable vocalism.

There were three fundamental stem types in Proto-Afroasiatic: (A) verb stems, (B) noun and adjective stems, and (C) pronoun and indeclinable stems. Only pronoun and indeclinable stems could end in a vowel. Verb and noun stems, however, had to end in a consonant (it may be noted that this is the stem patterning posited by EHRET [1980: 45-47] for Proto-Southern Cushitic).

As in Proto-Indo-European, the consonants carried the basic meaning of the stem, while the vowels were used as modifiers: that is to say that grammatical categorization was partially achieved by means of fixed vocalic patterning, at least in the verb stems.

It is thus now certain beyond any reasonable doubt that the third consonantal element of the Proto-Semitic root, be it infix or suffix, was simply not a part of the root, in the overwhelming majority of cases, at the Proto-Afroasiatic level and that the underlying basic root structure patterning was biconsonantal.

#### 9. *Uralic-Yukaghir*

Vowel harmony and consonant harmony are two notable phonological characteristics of the Uralic languages. In those Uralic languages exhibiting vowel harmony, the system is generally based upon a front ~ back contrast, most often with the vowels *i* and *e* being neutral in regard to this contrast and thus able to combine freely with either front or back vowels, though absolute consistency is unusual. The vowel harmony systems found in the Uralic languages thus differ in this respect from those found in the Altaic languages, especially Turkic and Mongolian, where more consistent systems are the rule. As an active phonological feature, consonant harmony is not as widespread as vowel harmony, being found exclusively in Balto-Finnic and Lapp (though there are traces in Mordvin and Cheremis [Mari]). Consonant harmony is based upon a contrast, in different forms of the same word, between (1) medial voiceless geminated stops at the beginning of an open syllable versus medial single voiceless stops at the beginning of a closed syllable on the one hand and between (2) medial single voiceless stops at the beginning of an open syllable versus medial voiced stops, fricatives, or zero at the beginning of a closed syllable on the other hand. Diachronically, the system of consonant harmony may be viewed as a weakening of the phonetic value of a consonant before closed syllables. This resulted in a correlation of so-called "strong-grade" variants with open syllables and so-called "weak-grade" variants with closed syllables. Even though



consonant harmony began as a purely phonetic process, however, it has since become morphologized in those languages where it developed, and a certain amount of leveling has also taken place. In Estonian, in particular, so many diachronic changes have taken place that there is no longer a readily discernible correlation between strong-grade and open syllables nor between weak-grade and closed syllables.

There are still many uncertainties regarding the reconstruction of the Proto-Uralic vowels. The system followed in this paper for Proto-Uralic is based upon that proposed by DÉCSY (1990: 22). In the Proto-Finno-Ugrian examples cited in this paper, however, the vowels are generally given in accordance with RÉDEI (1986-1988). DÉCSY's system is as follows:

<i>i</i>	<i>u</i>
<i>e</i>	<i>o</i>
<i>ä</i>	<i>a</i>

Though front rounded and back (or central) unrounded vowels are typical characteristics of most Uralic languages, they are innovations and are not to be reconstructed for Proto-Nostratic.

There is broad agreement among Uralic scholars concerning Proto-Uralic consonantism. Though most consonants could appear both initially and medially, a small number were found only medially. Word initially, Proto-Uralic had the following sounds (cf. COLLINDER 1965: 75-83): *\*p-*, *\*t-*, *\*k-*, *\*č-*, *\*tʲ-* (traditional *\*ć-*), *\*s-*, *\*sʲ-* (traditional *\*ś-*), *\*δʲ-* (traditional *\*đʲ-*), *\*y-*, *\*w-*, *\*l-*, *\*lʲ-* (traditional *\*lʹ-*), *\*r-*, *\*nʲ-* (traditional *\*ń-*), *\*n-*, and *\*m-*. Medially between vowels, the following sounds were found (cf. COLLINDER 1965: 83-92): *\*-p-*, *\*-t-*, *\*-k-*, *\*-č-*, *\*-tʲ-*, *\*-s-*, *\*-sʲ-*, *\*-ś-*, *\*-y-*, *\*-δ-*, *\*-δʲ-*, *\*-y-*, *\*-w-*, *\*-l-*, *\*-lʲ-*, *\*-r-*, *\*-ŋ-*, *\*-ŋk-*, *\*-ŋt-*, *\*-n-*, *\*-nt-*, *\*-nʲ-*, *\*-m-*, *\*-mt-*, and *\*-mp-*.

The Proto-Uralic consonant system may be reconstructed as follows (cf. AUSTERLITZ 1968: 1375-1377; DÉCSY 1990: 25):

<i>p</i>	<i>t</i>	<i>č</i>	<i>tʲ</i>	<i>k</i>
	<i>δ</i>		<i>δʲ</i>	<i>γ</i>
	<i>s</i>	<i>š</i>	<i>sʲ</i>	
<i>m</i>	<i>n</i>		<i>nʲ</i>	<i>ŋ</i>
	<i>r</i>	<i>l</i>	<i>lʲ</i>	
<i>w</i>			<i>y</i>	

Morphologically, the Uralic languages are underlying agglutinating, though many of the modern languages, especially Estonian, which has innovated considerably, have deviated from the original type. The original syntactic structure was probably SOV, and this is fairly well

preserved in the modern Samoyed and Ob-Ugric languages (Ostyak [Xanty] and Vogul [Mansi]) and Cheremis (Mari). The basic word order in the other languages is SOV, though, as a general rule, word order in all Uralic languages is rather flexible. Hungarian stands apart, word order being determined here more by topic-comment considerations than in the other Uralic languages, so that neither SOV nor SVO can be said to be dominant.

### 10. *Elamo-Dravidian*

Word initially, there were only voiceless stops in Proto-Dravidian. This is still the situation found in Tamil. On the basis of the reflexes found in South Dravidian languages and Telugu, a series of alveolars distinct from dentals and retroflexes has been reconstructed for Proto-Dravidian. A notable feature of Proto-Dravidian consonantism is the absence of sibilants. Medially, Proto-Dravidian had a contrast between geminated (including clusters of nasal plus consonant) and non-geminated consonants. Initially and medially in combination with other stops, *\*p*, *\*t*, *\*k*, and *\*c* were voiceless; between vowels and before nasals, they were voiced. The geminates were voiceless.

Proto-Dravidian had five short and long vowels plus the sequences *\*ay* and *\*aw*.

The reconstruction shown below is close to that set up by Kamil ZVELEBIL (1970: 77) for Proto-Dravidian; however, I have followed Thomas BURROW and Murray B. EMENEAU (1984: xii-xiii) in the representation of the alveolar as *\*ɽ* instead of *\*t̪*, even though the evidence from the Dravidian daughter languages seems to point to underlying /t/ at the Proto-Dravidian level. The reason for my decision to represent the Proto-Dravidian phoneme as *\*ɽ* instead of *\*t̪* is based upon the observation that this phoneme corresponds to /t/ in the closely-related Elamite (though there is some room for interpretation here) as well as in the other Nostratic languages.

The Proto-Dravidian phonological system is to be reconstructed as follows:

<i>p-</i>	<i>t-</i>			<i>c-</i>	<i>k-</i>
<i>-p-</i>	<i>-t-</i>	<i>-ɽ-</i>	<i>-t̪-</i>	<i>-c-</i>	<i>-k-</i>
<i>-pp-</i>	<i>-tt-</i>	<i>-ɽɽ-</i>	<i>-t̪t̪-</i>	<i>-cc-</i>	<i>-kk-</i>
<i>-mp-</i>	<i>-nt-</i>	<i>-nɽ-</i>	<i>-nt̪-</i>	<i>-ñc-</i>	<i>-ñk-</i>
<i>-p(u)</i>	<i>-t(u)</i>	<i>-ɽ(u)</i>	<i>-t̪(u)</i>	<i>-c(u)</i>	<i>-k(u)</i>
<i>m</i>	<i>n</i>		<i>ɳ</i>	<i>ñ</i>	
<i>-mm-</i>	<i>-nn-</i>		<i>-ɳɳ-</i>	<i>-ññ-</i>	
<i>v-</i>	<i>-r</i>	<i>-l</i>	<i>-ɽ</i>	<i>y</i>	
<i>-v-</i>	<i>-r-</i>	<i>-l-</i>	<i>-ɽ-</i>	<i>-y-</i>	

		-l		
		-l-		
-vv-	-ll-	-ll-	-yy-	
(-v)				
	<i>e</i>	<i>o</i>	<i>a</i>	<i>i</i>
	<i>ē</i>	<i>ō</i>	<i>ā</i>	<i>ī</i>
				<i>u</i>
				<i>ū</i>

Morphologically, the Dravidian languages are agglutinating. The basic root type was monosyllabic, though there is some indication that an extremely small number of bisyllabic roots may have to be reconstructed at the Proto-Dravidian level as well. This is, however, by no means certain, and it is best at present to regard Proto-Dravidian roots as exclusively monosyllabic. Inflectional categorization was achieved by means of suffixes added directly to the lexical roots or to the lexical roots extended by means of derivational suffixes. Any vowel, long or short, could appear in a root, but only *a*, *i*, and *u* could appear in a suffix. Two basic parts of speech were differentiated in Proto-Dravidian: nouns and verbs. Nouns were inflected for case, person, number, and gender. Eight cases (nominative, accusative, sociative, dative, genitive, instrumental, locative, and ablative), two numbers (singular and plural), and two genders (animate and inanimate) are assumed to have existed in Proto-Dravidian. Verbs were inflected for tense and person. There were two tenses (past and non-past) and two moods (modal and indicative). Indeclinables existed as a separate stem type distinct from nouns and verbs. Syntactically, the basic word order was SOV.

### 11. Altaic

Traditionally, Altaic has included the core groups (Chuvash-)Turkic, Mongolian, and (Manchu-)Tungus, to which some have tried to add Korean, Japanese-Ryukyuan, and Ainu. Looking at just the core group, one is hard-pressed to find features common to all three. There are, to be sure, common features between (Chuvash-)Turkic and Mongolian on the one hand and between Mongolian and (Manchu-)Tungus on the other, but there appear to be relatively few features to (Chuvash-)Turkic and (Manchu-)Tungus alone. All three are, in fact, similar in structure, but this has been considered by some to be strictly a typological characteristic. The common features found between the members of the core group have been explained as due to diffusion, and, for a good portion of the common lexical material, this seems to be a valid explanation. There are, however, features common (pronouns, to cite a single example) to the members of the core group as a whole that cannot be explained as due to diffusion, and which do indeed point to some sort of

genetic relationship. The problem is in trying to define the nature of that relationship. Two explanations are possible: (1) The shared features are due to common descent from Proto-Nostratic and do not imply a closer relationship between the three. In this scenario, (Chuvash-)Turkic, Mongolian, and (Manchu-)Tungus turn out to be three independent branches of Nostratic. (2) The shared features are due to descent from a common Altaic parent language intermediate between Proto-Nostratic and each of the core group members. The problem with the first explanation is that it merely shifts the question back to the Nostratic level without resolving a thing, whereas the second explanation keeps the focus exactly where it belongs, namely, on the core group. The second alternative thus remains a viable hypothesis. I would unhesitatingly include the following groups within the Altaic language family: (Chuvash-)Turkic, Mongolian, (Manchu-)Tungus, and Korean, while Japanese-Ryukyuan appears to be made up of an Altaic element that has been superimposed on an Austronesian substratum. The shared features between (Chuvash-)Turkic, Mongolian, and (Manchu-)Tungus may be looked upon as due to common descent from an Altaic parent language. Language change over time has gradually led to increasing differentiation between each of the three core group members, while diffusion, especially lexical diffusion, has tended to complicate the picture and has made it difficult to differentiate between that which is borrowed and that which is inherited. The recent book by Sergej STAROSTIN (1991) attempts to clarify many of the issues surrounding the problems associated with setting up an Altaic language family, including the relationship of Korean and Japanese to the other Altaic language groups.

Probably the most notable characteristic of the Altaic languages is the assimilatory phenomenon known as "vowel harmony". In the Turkic languages, for example, the first vowel segment occurring in a word influences the following vowel segments so that all vowels in the word have certain features in common. In Kirghiz, all of the vowels occurring in a given word must have the same feature for front ~ back and for rounded ~ unrounded, while height distinctions do not figure into the system of vowel harmony at all, so that high and non-high vowels can be freely combined in a word. It was the development of the system of vowel harmony that was responsible for the appearance of front rounded and back unrounded vowels in Altaic. These vowels are, thus, a later development and are not to be reconstructed for Proto-Nostratic.

In my recent book (BOMHARD - KERNS 1994), I mostly followed the reconstruction of the Proto-Altaic phonological system proposed by Nicholas POPPE (1960), while I based the Proto-Altaic reconstructed forms upon those proposed by John STREET (1974). According to POPPE, Proto-Altaic is assumed to have had a voicing contrast in stops and

affricates, but, as he notes (1960: 9-10), there is a possibility that the contrast could have been between voiceless aspirated and voiceless unaspirated stops and affricates instead. An entirely different approach is taken by ILLICH-SVITYCH (1971- : I. 147-156), who reconstructs the three-way contrast of (1) voiceless aspirated, (2) plain voiceless, and (3) plain voiced for Proto-Altaic, and this is also the system followed by STAROSTIN (1991) in his important new book. According to POPPE's reconstruction, neither the liquids nor the velar nasal were used word initially, while the voiceless stops and voiceless dental affricate were strongly aspirated. Proto-Altaic also had a rich system of long and short vowels.

Following POPPE, the Proto-Altaic phonological system may be reconstructed as follows:

<i>p</i>	<i>t</i>	<i>č</i>	<i>k</i>					
<i>b</i>	<i>d</i>	<i>ž</i>	<i>g</i>					
	<i>s</i>							
<i>m</i>	<i>n</i>	<i>nʸ</i>	<i>-ŋ-</i>					
<i>-l-</i> ( <i>-lʰ-</i> )		<i>-lʸ-</i> ( <i>-lʰ²-</i> )						
<i>-r-</i> ( <i>-rʰ-</i> )		<i>-rʸ-</i> ( <i>-rʰ²-</i> )						
		<i>y</i>						
<i>a</i>	<i>o</i>	<i>u</i>	<i>i</i>	<i>e</i>	<i>é</i>	<i>ö</i>	<i>ù</i>	<i>ĩ</i>
<i>ā</i>	<i>ō</i>	<i>ū</i>	<i>ī</i>	<i>ē</i>	<i>ě</i>	<i>ō̄</i>	<i>ū̄</i>	<i>ĩ̄</i>

Morphologically, the Altaic languages are agglutinating in structure. Syntactically, the original structure was SOV, and this is well preserved in the modern languages, especially the Turkic languages, which are fairly strict in this regard, while more freedom is found in the Mongolian and (Manchu-)Tungus languages.

## 12. Sumerian

In a series of recent, privately-circulated papers, Claude BOISSON has explored lexical parallels between Sumerian and other languages, especially the Nilo-Saharan and Nostratic languages. BOISSON has been very careful not to draw wild conclusions from the data he has amassed about possible relationship of Sumerian to other languages or language families. Yet, the lexical parallels he has uncovered between Sumerian and the Nostratic languages, especially Dravidian, though not numerous, look very promising and permit one to establish tentative sound correspondences between Sumerian and the rest of Nostratic.

The Sumerian cuneiform syllabary distinguished the following sounds:



<i>p</i>	<i>t</i>		<i>k</i>	
<i>b</i>	<i>d</i>		<i>g</i>	
	<i>s</i>	<i>š</i>		<i>h</i>
	<i>z</i>			
<i>m</i>	<i>n</i>		<i>ḡ (= ŋ)</i>	
	<i>l</i>			
	<i>r</i>			
<i>a</i>	<i>e</i>	<i>i</i>	<i>u</i>	

There may have been corresponding long vowels as well. There were no initial consonant clusters, while final consonants, especially *t*, *d*, *k*, *g*, *m*, *n*, and *r*, were often omitted in the writing (cf. THOMSEN 1984: 43), and this often makes it difficult to ascertain the form of the word. Internally, there was a tendency for consonants to assimilate. The traditional transliteration shows a voicing contrast in stops. There is a very strong probability, however, that the actual contrast was between voiceless aspirated versus voiceless unaspirated or simply between tense versus lax (cf. BOISSON 1988b: 215-219; THOMSEN 1984: 43): traditional *p*, *t*, *k* = *p<sup>h</sup>*, *t<sup>h</sup>*, *k<sup>h</sup>* respectively, while traditional *b*, *d*, *g* = *p*, *t*, *k* respectively. Traditional *z* may have been an affricate (cf. BOISSON 1989b: 221-226). Lastly, BAUER's proposed *d'* (cf. THOMSEN 1984: 44) is highly questionable (cf. BOISSON 1989b: 212-214).

The Sumerian root was generally monosyllabic: CV, VC, and, most often, CVC. There was no distinction between verbal roots and nominal roots — thus, for example *dùg* could mean either “good” or “to be good”.

There is still not, even after more than a century of intensive study, widespread agreement among experts in the fields on many fundamental questions of Sumerian grammar. Nevertheless, the overall structure is clear. Morphologically, Sumerian was an agglutinating language. Three word classes were distinguished: nouns, verbs, and adjectives. Grammatical gender proper did not exist, but there was a morphological distinction made between animate and inanimate. Sumerian differentiated between ergative and absolutive in nouns. In pronouns, however, the patterning is that of a nominative-accusative system. Syntactically, the basic word order was SOV.

In the Sumerian texts, certain non-standard forms of speech can be discerned. It is not entirely clear what this means — perhaps different dialects, perhaps not; perhaps so-called “refined speech”, perhaps not. These forms, which have been encountered mostly in religious texts, were labeled “Emesal” by the scribes, while the standard forms were labeled “Emegir”.

13. *Proto-Nostratic*

Proto-Nostratic had a rich system of stops and affricates. Each stop and affricate series was characterized by the three-way contrast (1) voiceless (aspirated), (2) voiced, and (3) glottalized. The aspiration of series (1) was phonemically non-distinctive.

Three primary vowels may be reconstructed for Proto-Nostratic: *\*a*, *\*i*, and *\*u*, and this, along with the addition of the vowel *e*, is the situation reflected in Sumerian, which is particularly conservative in regard to vocalism. These vowels must have been subject to considerable subphonemic variation in the Nostratic parent language. The high front and back vowels *\*i* and *\*u* may be assumed to have had lowered variants (indicated in the Proto-Nostratic reconstructions as *\*e* and *\*o* respectively), while the central low vowel *\*a* may be assumed to have had higher variants (indicated in the Proto-Nostratic reconstructions as *\*ə*). It was the reanalysis, phonemicization, and exploitation of this subphonemic variation that gave rise to the ablaut and vowel harmony patterning found in the majority of the Nostratic daughter languages. In Afroasiatic, on the other hand, the high allophones merged into *\*ə*, and the low allophones merged into *\*a*. It is unclear whether phonemic long vowels existed in Proto-Nostratic as well, though the evidence seems to indicate that they did not.

The Proto-Nostratic phonological system may tentatively be reconstructed as follows:

## STOPS AND AFFRICATES:

$p^{[h]}$	$t^{[h]}$	$c^{[h]}$	$t^y^{[h]}$	$tʃ^{[h]}$	$k^y^{[h]}$	$k^{[h]}$	$k^w^{[h]}$	$q^{[h]}$
$b$	$d$	$z$	$d^y$		$g^y$	$g$	$g^w$	$g$
$p'$	$t'$	$c'$	$t'^y$	$tʃ'$	$k'^y$	$k'$	$k'^w$	$q'$ $q'^w$ $?$

## FRICATIVES:

$s$	$s^y$	$h$	$ħ$
			$ʃ$

## GLIDES:

$w$	$y$
-----	-----

## NASALS AND LIQUIDS:

$m$	$n$	$n^y$	$\eta$
	$l$	$l^y$	
	$r$	$r^y$	

## VOWELS:

$i \sim e$	$u \sim o$
$ə \sim a$	

Also the sequences:       $iy \sim ey$        $uy \sim oy$        $\partial y \sim ay$   
                                   $iw \sim ew$        $uw \sim ow$        $\partial w \sim aw$

The palatalized velars are reconstructed solely on the basis of the reflexes found in Afroasiatic, and their reconstruction at the Proto-Nostratic level is, therefore, highly uncertain. I would like to be able to propose that the Afroasiatic reflexes are due to an innovation in which plain velars were palatalized before front vowels, but the evidence I have gathered to date is simply too contradictory to allow me to make such a statement with even a modicum of certainty.

We may note in passing that the vowel system reconstructed above for Proto-Nostratic is similar to that found in Chukchi (cf. GREENBERG 1990: 115):

High:	<i>i</i>	<i>e</i>	<i>u</i>	$\partial$
Low:	<i>e</i>	<i>a</i>	<i>o</i>	

The Chukchi vowels form a system of vowel harmony in which the second correspondent (*e*, *a*, *o*) is labeled “dominant”, and the first (*i*, *e*, *u*) “recessive”. Native Chukchi words must contain either all “dominant” or all “recessive” vowels; the two correspondents cannot co-exist in the same word. The schwa ( $\partial$ ) is neutral in regard to the “dominant” ~ “recessive” contrast.

The system of vowel harmony found in Chukchi operates according to different principles than the system found, for example, in Altaic. In Altaic, the direction of vowel harmony is determined by the vowel of the root. In Chukchi, on the other hand, a particular morpheme is either “dominant” or “recessive”; it is the vowel of the “dominant” morpheme (this need not be the root) that influences the remaining vowels.

According to GREENBERG (1990), traces of an earlier system of vowel harmony can be discerned in Proto-Indo-European.

#### *14. Root Structure Patterning in Proto-Nostratic*

Comparison of the various Nostratic daughter languages, especially Proto-Indo-European, Proto-Kartvelian, and Proto-Afroasiatic, makes it possible to determine the rules governing the structural patterning of roots and stems in Proto-Nostratic. Most likely, the patterning was as follows:

1. There were no initial vowels in Proto-Nostratic. Therefore, every root began with a consonant.
2. Originally, there were no initial consonant clusters either. Consequently, every root began with one and only one consonant. Medial clusters were permitted, however.

3. Two basic root types existed: (A) \*CV and (B) \*CVC, where C = any non-syllabic, and V = any vowel. Permissible root forms coincided exactly with these two syllable types.
4. A stem could either be identical with a root or it could consist of a root plus a single derivational morpheme added as a suffix to the root: \*CVC-VC-. Any consonant could serve as a suffix.
5. A stem could thus assume any one of the following shapes: (A) \*CV-, (B) \*CVC-, (C) \*CVC-VC- (\*CVC-C- as well, before vowels), or (D) \*CVC-CVC-. As in Proto-Altaic, the undifferentiated stems were real forms in themselves and could be used without additional suffixes.

The original root structure patterning was maintained longer in Proto-Indo-European, Proto-Kartvelian, and Proto-Afroasiatic than in the other branches. The root structure constraints found in Proto-Indo-European were an innovation. Both the Proto-Dravidian and the Proto-Altaic root structure patterning can be derived from earlier systems identical to what is proposed above for Proto-Nostratic. In Proto-Uralic, the rule requiring that all words end in a vowel was an innovation. It should be mentioned here that reduplication was a widespread phenomenon.

On the basis of the evidence of Proto-Indo-European, Proto-Kartvelian, Proto-Afroasiatic, Proto-Dravidian, and Proto-Altaic, it may be assumed that there were three fundamental stem types: (A) verbal stems, (B) nominal and adjectival stems, and (C) pronominal and indeclinable stems. Uralic stands apart in showing no differentiation between verbal and nominal stems. In Sumerian, though nominal and verbal roots were identical in form, three separate word classes were distinguished: (A) nouns, (B) verbs, and (C) adjectives. Returning to Proto-Nostratic, only pronominal and indeclinable stems could end in a vowel. Verbal and nominal stems, on the other hand, had to end in a consonant (though vowels could serve as grammatical markers).

Morphologically, Proto-Nostratic was most likely an agglutinating language. Those daughter languages that are highly inflected, namely, Proto-Indo-European, Proto-Kartvelian, and Proto-Afroasiatic, may be assumed to have gone through earlier periods of development as agglutinating languages. Such a development is suggested for Proto-Indo-European by BOMHARD (1988: 475-488) and, in particular, RASMUSSEN (1987: 107-122); see also ADRADOS (1989).

### *15. Nostratic Sound Correspondences*

The following tables summarize the sound correspondences existing among those branches of Nostratic dealt with in this paper. These correspondences are based upon the analysis of the lexical material that forms the core of the joint monograph by me and John C. KERNS (BOMHARD - KERNS 1994).

Chart 1: Nostratic Sound Correspondences

Proto-Nostratic	Proto-Indo-European	Proto-Kartvelian	Proto-Afroasiatic	Proto-Uralic	Proto-Dravidian	Proto-Altaic	Sumerian
<i>b-</i> <i>-b-</i> <i>p</i> <sup>[h]</sup> <i>-</i> <i>-p</i> <sup>[h]</sup> <i>-</i> <i>p</i> <sup>ʔ</sup> <i>-</i> <i>-p</i> <sup>ʔ</sup> <i>-</i>	<i>b</i> <sup>[h]</sup> <i>-</i> <i>-b</i> <sup>[h]</sup> <i>-</i> <i>p</i> <sup>[h]</sup> <i>-</i> <i>-p</i> <sup>[h]</sup> <i>-</i> ( <i>p</i> <sup>ʔ</sup> <i>-</i> ) ( <i>-p</i> <sup>ʔ</sup> <i>-</i> )	<i>b-</i> <i>-b-</i> <i>p</i> <sup>[h]</sup> <i>-</i> <i>-p</i> <sup>[h]</sup> <i>-</i> <i>p</i> <sup>ʔ</sup> <i>-</i> <i>-p</i> <sup>ʔ</sup> <i>-</i>	<i>b-</i> <i>-b-</i> <i>p</i> <sup>[h]</sup> <i>-</i> <i>-p</i> <sup>[h]</sup> <i>-</i> <i>p</i> <sup>ʔ</sup> <i>-</i> <i>-p</i> <sup>ʔ</sup> <i>-</i>	<i>p-</i> <i>-w-</i> <i>p-</i> <i>-p-</i>	<i>p-</i> <i>-pp-/ -vv-</i> <i>p-</i> <i>-pp-/ -v-</i>	<i>b-</i> <i>-b-</i> <i>p-</i> <i>-p-/ -b-</i>	<i>b-</i> <i>-b-</i> <i>p-</i> <i>-p-</i>
<i>d-</i> <i>-d-</i> <i>t</i> <sup>[h]</sup> <i>-</i> <i>-t</i> <sup>[h]</sup> <i>-</i> <i>t</i> <sup>ʔ</sup> <i>-</i> <i>-t</i> <sup>ʔ</sup> <i>-</i>	<i>d</i> <sup>[h]</sup> <i>-</i> <i>-d</i> <sup>[h]</sup> <i>-</i> <i>t</i> <sup>[h]</sup> <i>-</i> <i>-t</i> <sup>[h]</sup> <i>-</i> <i>t</i> <sup>ʔ</sup> <i>-</i> <i>-t</i> <sup>ʔ</sup> <i>-</i>	<i>d-</i> <i>-d-</i> <i>t</i> <sup>[h]</sup> <i>-</i> <i>-t</i> <sup>[h]</sup> <i>-</i> <i>t</i> <sup>ʔ</sup> <i>-</i> <i>-t</i> <sup>ʔ</sup> <i>-</i>	<i>d-</i> <i>-d-</i> <i>t</i> <sup>[h]</sup> <i>-</i> <i>-t</i> <sup>[h]</sup> <i>-</i> <i>t</i> <sup>ʔ</sup> <i>-</i> <i>-t</i> <sup>ʔ</sup> <i>-</i>	<i>t-</i> <i>-t-</i> <i>t-</i> <i>-t(t)-</i> <i>t-</i> <i>-t-</i>	<i>t-</i> <i>-t(t)-</i> <i>t-</i> <i>-t(t)-</i> <i>t-</i> <i>-t(t)-</i>	<i>d-</i> <i>-d-</i> <i>t-</i> <i>-t-</i> <i>t-</i> <i>-d-</i>	<i>d-</i> <i>-d-</i> <i>t-</i> <i>-t-</i> <i>d-</i> <i>-d-</i>
<i>d</i> <sup>y</sup> <i>-</i> <i>-d</i> <sup>y</sup> <i>-</i> <i>t</i> <sup>y</sup> <sup>[h]</sup> <i>-</i> <i>-t</i> <sup>y</sup> <sup>[h]</sup> <i>-</i> <i>t</i> <sup>y</sup> <i>-</i> <i>-t</i> <sup>y</sup> <i>-</i> <i>s</i> <sup>y</sup> <i>-</i> <i>-s</i> <sup>y</sup> <i>-</i>	<i>d</i> <sup>[h]</sup> <i>-</i> <i>-d</i> <sup>[h]</sup> <i>-</i> <i>t</i> <sup>[h]</sup> <i>-</i> <i>-t</i> <sup>[h]</sup> <i>-</i> <i>t</i> <sup>ʔ</sup> <i>-</i> <i>-t</i> <sup>ʔ</sup> <i>-</i> <i>s-</i> <i>-s-</i>	<i>š-</i> <i>-š-</i> <i>č</i> <sup>[h]</sup> <i>-</i> <i>-č</i> <sup>[h]</sup> <i>-</i> <i>č</i> <sup>ʔ</sup> <i>-</i> <i>-č</i> <sup>ʔ</sup> <i>-</i> <i>š-</i> <i>-š-</i>	<i>d</i> <sup>y</sup> <i>-</i> <i>-d</i> <sup>y</sup> <i>-</i> <i>t</i> <sup>y</sup> <sup>[h]</sup> <i>-</i> <i>-t</i> <sup>y</sup> <sup>[h]</sup> <i>-</i> <i>t</i> <sup>y</sup> <i>-</i> <i>-t</i> <sup>y</sup> <i>-</i> <i>s</i> <sup>y</sup> <i>-</i> <i>-s</i> <sup>y</sup> <i>-</i>	<i>t</i> <sup>y</sup> <i>-</i> <i>-t</i> <sup>y</sup> <i>-</i> <i>t</i> <sup>y</sup> <i>-</i> <i>-t</i> <sup>y</sup> <i>-</i> <i>t</i> <sup>y</sup> <i>-</i> <i>-t</i> <sup>y</sup> <i>t</i> <sup>y</sup> <i>-</i> <i>s</i> <sup>y</sup> <i>-</i> <i>-s</i> <sup>y</sup> <i>-</i>	<i>c-</i> <i>-c(c)-</i> <i>c-</i> <i>-c(c)-</i> <i>c-</i> <i>-c(c)-</i> <i>c-</i> <i>-c(c)/ -y-</i>	<i>š-</i> <i>-š-/ -d-</i> <i>č-</i> <i>-č-</i> <i>č-</i> <i>-š-</i> <i>s-</i> <i>-s-</i>	<i>d-</i> <i>-d-</i> <i>š-</i> <i>-š-</i> <i>d-</i> <i>-d-</i> <i>š-</i> <i>-š-</i>



$\bar{z}$ - $-\bar{z}$ - $c[{}^h]$ - $-c[{}^h]$ - $c^{'}$ - $-c^{'}$ - $s$ - $-s$ -	$d[{}^h]$ - $-d[{}^h]$ - $t[{}^h]$ - $-t[{}^h]$ - $t^{'}$ - $-t^{'}$ - $s$ - $-s$ -	$\bar{z}_I$ - $-\bar{z}_I$ - $c[{}^h]_I$ - $-c[{}^h]_I$ - $c^{'}_I$ - $-c^{'}_I$ - $s_I$ - $-s_I$ -	$\bar{z}$ - $-\bar{z}$ - $c[{}^h]$ - $-c[{}^h]$ - $c^{'}$ - $-c^{'}$ - $s$ - $-s$ -	$\check{z}$ - $-\check{z}$ - $\check{c}$ - $-\check{c}$ - $\check{c}$ - $-\check{c}$ - $s$ - $-s$ -	$c$ - $-c(c)$ - $c$ - $-c(c)$ - $c$ - $-c(c)$ - $c$ - $-c(c)$ -	$\check{z}$ - $-\check{z}/-d$ - $\check{c}$ - $-\check{c}$ - $\check{c}$ - $-\check{z}$ - $s$ - $-s$ -	$z$ - $-z$ - $s$ - $-s$ - $z$ - $-z$ - $s$ - $-s$ -
$g$ - $-g$ - $k[{}^h]$ - $-k[{}^h]$ - $k^{'}$ - $-k^{'}$ -	$g[{}^h]$ - $-g[{}^h]$ - $k[{}^h]$ - $-k[{}^h]$ - $k^{'}$ - $-k^{'}$ -	$g$ - $-g$ - $k[{}^h]$ - $-k[{}^h]$ - $k^{'}$ - $-k^{'}$ -	$g$ - $-g$ - $k[{}^h]$ - $-k[{}^h]$ - $k^{'}$ - $-k^{'}$ -	$k$ - $-\gamma$ - $k$ - $-k(k)$ - $k$ - $-k$ -	$k$ - $-k$ - $k$ - $-k(k)$ - $k$ - $-k(k)$ -	$g$ - $-g$ - $k$ - $-k/-g$ - $k$ - $-g$ -	$g$ - $-g$ - $k$ - $-k$ - $g$ - $-g$ -
$g^y$ - $-g^y$ - $k^y[{}^h]$ - $-k^y[{}^h]$ - $k^y$ - $-k^y$ -	$g[{}^h]$ - $-g[{}^h]$ - $k[{}^h]$ - $-k[{}^h]$ - $k^{'}$ - $-k^{'}$ -	$g$ - $-g$ - $k[{}^h]$ - $-k[{}^h]$ - $k^{'}$ - $-k^{'}$ -	$g^y$ - $-g^y$ - $k^y[{}^h]$ - $-k^y[{}^h]$ - $k^y$ - $-k^y$ -	$k$ - $-\gamma$ - $k$ - $-k(k)$ - $k$ - $-k$ -	$k$ - $-k$ - $k$ - $-k(k)$ - $k$ - $-k(k)$ -	$g$ - $-g$ - $k$ - $-k/-g$ - $k$ - $-g$ -	$g$ - $-g$ - $k$ - $-k$ - $g$ - $-g$ -
$g^w$ - $-g^w$ - $k^w[{}^h]$ - $-k^w[{}^h]$ - $k^w$ - $-k^w$ -	$g^w[{}^h]$ - $-g^w[{}^h]$ - $k^w[{}^h]$ - $-k^w[{}^h]$ - $k^w$ - $-k^w$ -	$gw/u$ - $-gw/u$ - $k[{}^h]_w/u$ - $-k[{}^h]_w/u$ - $k^w_w/u$ - $-k^w_w/u$ -	$g^w$ - $-g^w$ - $k^w[{}^h]$ - $-k^w[{}^h]$ - $k^w$ - $-k^w$ -	$k$ - $-\gamma$ - $k$ - $-k(k)$ - $k$ - $-k$ -	$k$ - $-k$ - $k$ - $-k(k)$ - $k$ - $-k(k)$ -	$g$ - $-g$ - $k$ - $-k/-g$ - $k$ - $-g$ -	$gu$ - $-gu$ - $ku$ - $-ku$ - $gu$ - $-gu$ -

Proto-Nostratic	Proto-Indo-European	Proto-Kartvelian	Proto-Afroasiatic	Proto-Uralic	Proto-Dravidian	Proto-Altaic	Sumerian
<i>g-</i> <i>-g-</i> <i>q[<sup>h</sup>]-</i> <i>-q[<sup>h</sup>]-</i> <i>q<sup>ʷ</sup>-</i> <i>-q<sup>ʷ</sup>-</i>	<i>g[<sup>h</sup>]-</i> <i>-g[<sup>h</sup>]-</i> <i>k[<sup>h</sup>]-</i> <i>-k[<sup>h</sup>]-</i> <i>k<sup>ʷ</sup>-</i> <i>-k<sup>ʷ</sup>-</i>	<i>g-</i> <i>-g-</i> <i>q[<sup>h</sup>]-</i> <i>-q[<sup>h</sup>]-</i> <i>q<sup>ʷ</sup>-</i> <i>-q<sup>ʷ</sup>-</i>	<i>g-</i> <i>-g-</i> <i>k[<sup>h</sup>]-</i> <i>-k[<sup>h</sup>]-</i> <i>k<sup>ʷ</sup>-</i> <i>-k<sup>ʷ</sup>-</i>	<i>k-</i> <i>-ɣ-</i> <i>k-</i> <i>-k(k)-</i> <i>k-</i> <i>-k-</i> <i>k-</i> <i>-k-</i>	<i>k-</i> <i>-k-</i> <i>k-</i> <i>-k(k)-</i> <i>k-</i> <i>-k(k)-</i> <i>k-</i> <i>-k(k)-</i>	<i>g-</i> <i>-g-</i> <i>k-</i> <i>-k/-g-</i> <i>k-</i> <i>-g-</i> <i>k-</i> <i>-g-</i>	<i>g-</i> <i>-g-</i> <i>h- (?)</i> <i>-h- (?)</i> <i>g-</i> <i>-g-</i> <i>gu-</i> <i>-gu-</i>
<i>tʃ[<sup>h</sup>]-</i> <i>-tʃ[<sup>h</sup>]-</i> <i>tʃ<sup>ʷ</sup>-</i> <i>-tʃ<sup>ʷ</sup>-</i>	<i>k[<sup>h</sup>]-</i> <i>-k[<sup>h</sup>]-</i> <i>k<sup>ʷ</sup>-</i> <i>-k<sup>ʷ</sup>-</i>	<i>x-</i> <i>-x-</i>	<i>tʃ[<sup>h</sup>]-</i> <i>-tʃ[<sup>h</sup>]-</i> <i>tʃ<sup>ʷ</sup>-</i> <i>-tʃ<sup>ʷ</sup>-</i>	<i>s<sup>y</sup>-</i> <i>-δ-</i> <i>δ<sup>y</sup>-</i> <i>-δ<sup>y</sup>-</i>	<i>c-</i> <i>-k-</i> <i>t-</i> <i>-t(!)-</i>	<i>k-</i> <i>-k/-g-</i> <i>k-</i> <i>-g-</i>	  <i>d-</i> <i>-d-</i>
<i>ʃ-</i> <i>-ʃ-</i> <i>ħ-</i> <i>-ħ-</i> <i>ʔ-</i> <i>-ʔ-</i> <i>h-</i> <i>-h-</i>	<i>ʃh-</i> <i>-ʃh-</i> <i>ħh-</i> <i>-ħh-</i> <i>ʔ-</i> <i>-ʔ-</i> <i>h-</i> <i>-h-</i>	<i>Ø-</i> <i>-Ø-</i> <i>x-</i> <i>-x-</i> <i>Ø-</i> <i>-Ø-</i> <i>Ø-</i> <i>-Ø-</i>	<i>ʃ-</i> <i>-ʃ-</i> <i>ħ-</i> <i>-ħ-</i> <i>ʔ-</i> <i>-ʔ-</i> <i>h-</i> <i>-h-</i>	<i>Ø-</i> <i>-Ø-</i> <i>Ø-</i> <i>-Ø-</i> <i>Ø-</i> <i>-Ø-</i> <i>Ø-</i> <i>-Ø-</i>	<i>Ø-</i> <i>-Ø-</i> <i>Ø-</i> <i>-Ø-</i> <i>Ø-</i> <i>-Ø-</i> <i>Ø-</i> <i>-Ø-</i>	<i>Ø-</i> <i>-Ø-</i> <i>Ø-</i> <i>-Ø-</i> <i>Ø-</i> <i>-Ø-</i> <i>Ø-</i> <i>-Ø-</i>	      <i>h-</i> <i>-h-</i> <i>Ø-</i> <i>-Ø-</i> <i>Ø-</i> <i>-Ø-</i>

y- -y- w- -w-	y- -y- w- -w-	y-/Ø- w- -w-	y- -y- w- -w-	y- -y- w- -w-	y-/Ø- -y- v-/Ø- -v-	y- -y-	
m- -m- n- -n- n <sup>y</sup> - -n <sup>y</sup> - -ŋ-	m- -m- n- -n- n- -n- -n-	m- -m- -n-	m- -m- n- -n- n- -n- -n-	m- -m- n- -n- n <sup>y</sup> - -n <sup>y</sup> - -ŋ-	m- -m- n- -n-/n- ñ- -ñ- -ñ-	m- -m- -n- n <sup>y</sup> - -n <sup>y</sup> - -ŋ-	m- -m- n- -n-
l- -l- -l̥- r- -r- -r <sup>y</sup> -	l- -l- -l̥- r- -r- -r-	l- -l- -l̥- r- -r- -r-	l- -l- -l̥- r- -r- -r-	l- -l- -l̥- r- -r- -r <sup>y</sup> -	l- -l- -l̥- -r-/r̥- r̥-	-l- -l̥- -r- -r <sup>y</sup> -	l- -l- r- -r-

Proto-Nostratic	Proto-Indo-European	Proto-Kartvelian	Proto-Afroasiatic	Proto-Uralic	Proto-Dravidian	Proto-Altaic	Sumerian
<i>i</i> <i>ə</i> <i>u</i>	<i>i, e</i> <i>e, a, ə</i> <i>u, o</i>	<i>i</i> <i>e, i</i> <i>u</i>	<i>ə</i> <i>ə</i> <i>ə</i>	<i>i</i> <i>e</i> <i>u</i>	<i>i</i> <i>e</i> <i>u</i>	<i>i, ī</i> <i>e</i> <i>u, ū</i>	<i>i</i> <i>e</i> <i>u</i>
<i>e</i> <i>a</i> <i>o</i>	<i>e</i> <i>a, o, ə</i> <i>o</i>	<i>e</i> <i>a</i> <i>o</i>	<i>a</i> <i>a</i> <i>a</i>	<i>e</i> <i>a, ä</i> <i>o</i>	<i>e</i> <i>a</i> <i>o</i>	<i>e</i> <i>a</i> <i>o, ö</i>	<i>e</i> <i>a</i> <i>u</i>
<i>iy</i> <i>əy</i> <i>uy</i>	<i>īy, ey, ī, ē, ĭ</i> <i>ey, ay, ĩy, ĩ</i> <i>īy, ī, ĭ</i>	<i>iy, i</i> <i>ey, i</i> <i>uy, i</i>	<i>əy</i> <i>əy</i> <i>əy</i>	<i>iy, i</i> <i>ey</i> <i>uy</i>	<i>iy, ī</i> <i>ey, ē</i> <i>uy, ū</i>	<i>ī, ī</i> <i>ē, i, ĭ</i>	<i>i</i> <i>i</i> <i>i</i>
<i>ey</i> <i>ay</i> <i>oy</i>	<i>ey, ĩy, ē, ĭ</i> <i>ay, oy, ĩy, ĩ</i> <i>oy, ĩy, ĩ</i>	<i>ey, i</i> <i>ay, i</i> <i>oy, i</i>	<i>ay</i> <i>ay</i> <i>ay</i>	<i>ey, e</i> <i>ay, äy</i> <i>oy</i>	<i>ey, ē</i> <i>ay, ā</i> <i>oy, ō</i>	<i>éy, ē</i> <i>a, i, ĭ</i>	<i>e</i> <i>e</i> <i>e</i>
<i>iw</i> <i>əw</i> <i>uw</i>	<i>ū, ūw, ū</i> <i>ew, aw, ũw, ũ</i> <i>ū, ō, ũw, ow, ũ</i>	<i>iw, u</i> <i>ew, u</i> <i>uw, u</i>	<i>əw</i> <i>əw</i> <i>əw</i>	<i>iw</i> <i>ew</i> <i>uw, u</i>	<i>iv, ī</i> <i>ev, ē</i> <i>uv, ū</i>	<i>ū, ū</i>	<i>u</i> <i>u</i> <i>u</i>
<i>ew</i> <i>aw</i> <i>ow</i>	<i>ew, ũw, ũ</i> <i>ow, ũw, ũ</i> <i>ō, ow, ũw, ũ</i>	<i>ew, u</i> <i>aw, u</i> <i>ow, u</i>	<i>aw</i> <i>aw</i> <i>aw</i>	<i>ew</i> <i>aw, äw</i> <i>ow, o</i>	<i>ev, ē</i> <i>av, ā</i> <i>ov, ō</i>	<i>ō, ō</i> <i>ō, ō</i>	<i>u</i> <i>u</i> <i>u</i>

Chart 2: The Nostratic Macrofamily

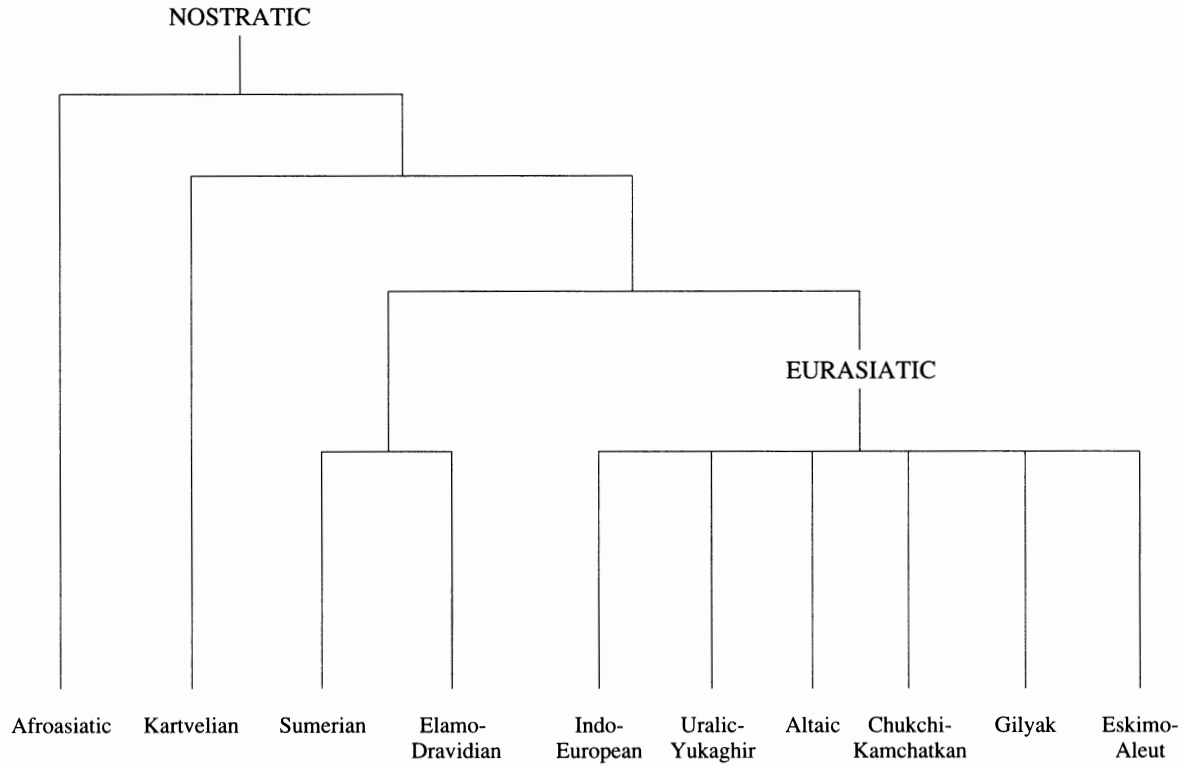
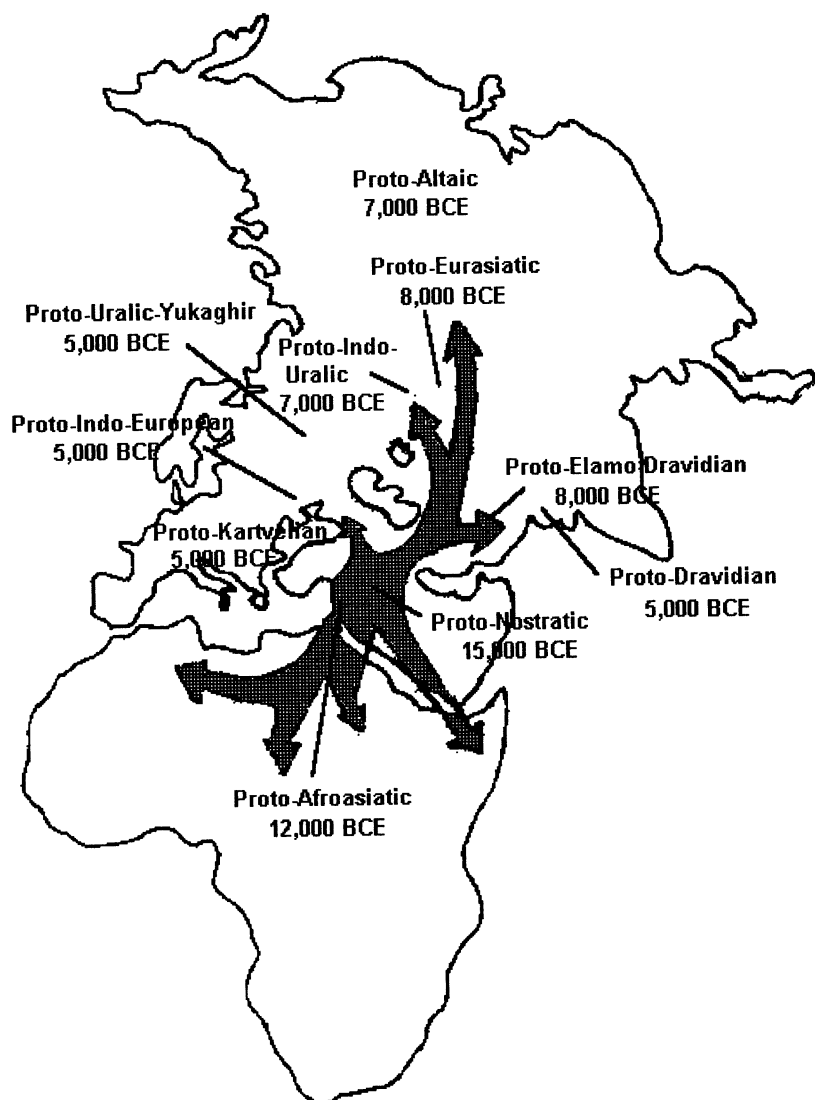


Chart 3: The Early Dispersal of the Nostratic Languages



## 16. New Etymologies

602. Proto-Nostratic *\*diy-/ \*dey-* “to suck, to suckle”:

- A. Proto-Indo-European *\*d<sup>h</sup>ǵ(i)y-/ \*d<sup>h</sup>ǵ(i)y-* “to suck, to suckle”: Sanskrit *dháyati* “to suck, to drink”, (causative) *dhāpáyate* “to give suck, to nourish”, *dhāyas-* “nourishing, refreshing”, *dhenú-h* “milk”, *dhātrí* “nurse”, *dhāyú-h* “voracious”, Ossetic *dāin*, *dāyun* “to suck”; Greek *θησθαι* “to suckle”, *θηλάζω* “to suckle”, *θηλή* “teat, nipple”, *θηλυς* “female”, (Hesychius) *θήνιον* “milk”; Armenian *diem* “to suck”; Albanian *djathë* “cheese”; Latin *fēlō* (also *fellō*) “to suckle, to suck”, *fēmina* “a female, a woman”, *filia* “daughter”, *filius* “son”; Old Irish *denaid* “to suck”, *dith* “sucked”; Gothic *daddjan* “to suckle”; Old Swedish *dægga* “to suckle”; Old High German *tāen* “to suckle”; Low German (Westfalian) *daiern* “to raise on milk”; Old English *dēon* “to suck”, *delu* “nipple (of breast)”, *diend* “suckling”; Old Prussian *dadān* “milk”; Latvian *dēju*, *dēt* “to suck”, *dēls* “son”; Old Church Slavonic *dojō*, *dojiti* “to suckle; to milk”, *dětb* “child”, *děva*, *děvica* “maiden, young girl”; Serbo-Croatian *dōjiti* “to suckle”, *dojka* “breast”. POKORNY (1959: 241-242) *\*dhē(i)-* “to suck, to suckle”; WALDE (1927-1932: I, 829-831) *\*dhēi-*; MANN (1984-1987: 178) *\*dhedh-* “nurse”, 178 *\*dhēdh-* (hypocorism of a relative), 178 *\*dhedhlō* “to suck”, 180 *\*dhēiō* “to suckle, to milk; to suck at the breast”, 181-182 *\*dhēlis*, *-ios*, *-iə* “suckling; suckling; teat”, 187 *\*dhētis*, *-iə* “suckling; suckling animal”, 191 *\*dhiniō* “to suckle, to nourish; to suck”, 195-196 *\*dhoin-*, *-us* “milch; milking cow”, 196 *\*dhoiō* (*\*dhoiō*) “to suckle, to milk; to suck”; WATKINS (1985: 13) *\*dhē(i)-* “to suck” (contracted from *\*dheǵ(i)-*); MAYRHOFER (1956-1980: II, 93, 99, 114); FRISK (1970-1973: I, 670, 671, 673-674); HULD (1984: 52-53); ERNOUT - MEILLET (1979: 224, 234); FEIST (1939: 112-113); LEHMANN (1986b: 86).
- B. Proto-Afroasiatic *\*day-/ \*dāy-* “teat, woman’s breast”: Proto-Semitic *\*dayd-* (> *\*dadd-* in Hebrew and Aramaic) “teat, woman’s breast” > Arabic (Ḥaḍramut) *dayd* “(married woman’s) breast; (cow’s) udder”; Hebrew *daḏ* “breast, teat, nipple”; Aramaic *daḏ* “teat”; Ugaritic *qd* “breast”. MURTONEN (1989: 145); DIAKONOFF (1992: 84) *\*dī-dī-* (> *dayd-*, *dadd-*) “teat, woman’s breast”. Semantic development as in Greek *θηλή* “teat, nipple”, cited above.
- C. Proto-Kartvelian (reduplicated) *\*deda-* “mother”: Old Georgian *deday* “mother”; Mingrelian *dida* “mother”; Laz *dida* “old woman, grandmother”; Svan *dede* “mother, grandmother”. Svan (unreduplicated) *diya* “mother, mom”. KLIMOV (1964: 71-72) (KLIMOV compares Proto-Indo-European *\*dhē-dhǵē* stem used to designate various relatives, cf. Greek *τήθη* “grandmother”, *τηθίς* “aunt”); SCHMIDT (1962: 103); FÄHNRIK (1994: 220).

BUCK 1949: 4.41 breast (of a woman); 5.16 suck (vb.).

603. Proto-Nostratic *\*k'ar-/\*k'ər-* “dark, dark-colored; dirty, soiled”:

- A. Proto-Indo-European *\*k'r-u-k'o-s, -eA [-aA]* (> *-ā*) “dirt, grime”: Greek (Hesychius) γρῦξ “dirt in the nails”; Modern English (regional) *crook* “smut, soot, dirt”; Latvian *gruzis* “dirt, smut; rubbish”. MANN (1984-1987: 300) *\*gruḡos, -ā* “dirt, grime”.
- B. Afroasiatic: Egyptian *qrm* “smoke”, *qrmt* “ashes”, *qrmts* “darkness”, *qrṯ* “dung”, (Demotic) *qrmts* “darkness”; Coptic *kromrm, krmrm* “to become dark”, *krmrōm* “to be dark” (reduplication of *kōrm* “smoke”), *kermi, krmes* “ash, soot, dust”, *krmts* “smoke, mist; darkness, obscurity”, *krōm* “fire”, *kōrm* “smoke”, *kerēt, čerēt* “dirt, dung”. ERMAN - GRAPOW (1926-1963: 5, 60); VYČICHL (1983: 85-86, 86); ČERNÝ (1976: 62, 335). According to VYČICHL (1983: 85), *qrmt* “ashes” appears to be a loan, most likely from Semitic. The following Highland East Cushitic forms may belong here as well, assuming semantic development as in Kannaḍa *kār* “blackness, rainy season” cited below: Burji *k'āraar-i* “rainy season”; Hadiyya *k'araat'o* “autumn, fall, season of small rains”; Kambata *k'araa-tu* “spring season”. Additional Cushitic cognates are given in DOLGOPOLSKY (1973: 206-207).

Note: The Dravidian and Altaic forms given in BOMHARD - KERNS (1994: 429-430, #274), are ambiguous and may belong here instead; they are as follows:

- C. Proto-Dravidian *\*kār-, \*kār-, \*kār-* “black, dark”: Tamil *karu* “to grow black, to darken, to become dirty, to become impure, to mature”, *karukaru* “to become very black”, *karuppu* “blackness, darkness, spot, taint, moral defect”, *kāru (kāri-)* “to be blackened”, *karai* “spot, stain, rust, blemish, fault, blackness, darkness”; Malayalam *kaṛa* “blackness, spot, stain, rust”, *karu* “black”, *karukka* “to grow black”, *kāru* “darkness, black cloud”; Kota *karp* “blackness, a demon”; Toda *kar* “dirt, spot, rust”, *karf- (kart-)* “to become black, dark”; Kannaḍa *kaṛaṅga* “to turn black”, *kaṛe, kari* “blackness, to color black, stain, blot”, *karrage, karrane* “blackly, blackness”; Koḍagu *kara-* (*karap-, karat-*) “to become black”, *karapi* “blackness”, *karatē* “black”, *kare* “stain”; Telugu *kaṛa* “blackness, a stain, blot; black”, *kari* “black”; Konda *kaṛi* “blackness”, *kaṛ(i)ni* “black”. BURROW - EMENEAU (1984: 130, no. 1395). Tamil *kār* “blackness, blemish, defect”, *kāṛakam* “blackness”; Kannaḍa *kār, kāḍu* “blackness, black”, *kaṛgu, kargu* “black”; Tuḷu *kāri, kāli* “blackish”; Māṇḍa *kaṛiṇḍi* “black”; Kuwi *kār-* “to become black”, *kāṛia* “black”. BURROW - EMENEAU (1984: 139, no. 1494). Tamil *karu* “black”, *karukkal* “darkness, twilight, cloudiness, sunburnt paddy crop”, *karukku (karukki-)* “to darken by heat, to burn, to scorch, to toast, to fry”, *karuku (karuki-)* “to be scorched, blackened by fire or sun, to become dark in the evening”, *karumai* “blackness”; Malayalam *kari, karu* “black; charcoal, coal”, *karikkal, karukkal* “twilight, dusk, frying”, *karima, karuma* “blackness”, *karimpu* “dark color, gray”; Kota *kar* “black”; Kannaḍa *karidu* “black”, *kargu* “to turn black”, *kare* “blackness”; Tuḷu *kari* “soot, charcoal”, *kariya* “black”; Koraga *kardi* “black”; Telugu *kaggu* “to fade, to turn black (through heat, smoking)”; Naiki (of Chanda) *karan, karen, kareyan* “black”. BURROW - EMENEAU (1984: 118, no. 1278[a]).



Tamil *kār* “blackness, darkness, cloud, rainy season”, *kār* “to darken, to grow black”, *kāri* “blackness, crow, black bull”; Kannaḍa *kār* “blackness, rainy season”; Tuḷu *kāru*, *kāri* “black, dark”; Gondi *kārial*, *kāryal*, *kāriyal*, *karial*, *kaṛial*, *kareyal*, *kari*, *karkāl* “black”. BURROW - EMENEAU (1984: 118-119, no. 1278[c]).

- D. Proto-Altaic *\*kara* “black”: Mongolian *qara* “black, dark, obscure”; Moghol *qarō* “black”; Dagur *χara*, *χar* “black”; Monguor *χara* “black”; Ordos *χara* “black”; Buriat *χara* “black”; Khalkha *χarv* “black”; Kalmyk *χarv* “black”; Turkish *kara* “black”; Turkmenian *gara* “black”; Tuvinian *kara* “black”; Yakut *χara* “black”; Chuvash *χura* “black”; Manchu *qara* “black (of animals)”. POPPE (1955: 131).

BUCK 1949: 15.88 dirty, soiled. ILLICH-SVITYCH (1971- : I, 337-338) no. 213 *\*Kar/āl* “black, dark-colored”.

On the other hand, the following should be added to #274, Proto-Nostratic *\*k<sup>[h]</sup>ar-/\*k<sup>[h]</sup>ər-* “black, dark”:

- B. Afroasiatic: Egyptian (Demotic) *krky* “filth”; Coptic *čorğ(e)*, *ğerği* “dirt, filth”, *r-čorğ* “to become filthy”. VYČIHL (1983: 347); ČERNÝ (1976: 336).

#### 604. Proto-Nostratic *\*rak<sup>ʔ</sup>-/\*rək<sup>ʔ</sup>-* “to wet, to moisten”:

- A. Proto-Indo-European *\*rek<sup>ʔ</sup>-/\*rok<sup>ʔ</sup>-* “to wet, to moisten” (*\*rek<sup>ʔ</sup>-nó-* “rain” apparently deglottalized to *\*rek-nó-* in Germanic *\*reg-na-z* “rain”): Gothic *riġn* “rain”; Old Icelandic *regn* “rain”, *regna*, *riġna* “to rain”, *raki* “dampness, wetness”, *rakr* “damp, wet”; Old English *regn*, *rēn* “rain”, *regnian* “to rain”; Old High German *regan* “rain”, *reganōn* “to rain”. Perhaps also Latin *rigō* “to wet, to moisten, to bedew” and Albanian *rredh* “to flow, to pour”. POKORNY (1959: 857) *\*reġ-* “moist, wet, damp”; WALDE (1927-1932: II, 365-366) *\*reġ-*, *\*req-*; WATKINS (1985: 54) *\*reg-* “moist” (suffix variant form *\*rek-no-* in Germanic *\*regnaz* “rain”); FEIST (1939: 397); LEHMANN (1986b: 284); DE VRIES (1962: 432 and 437); KLUGE (1967: 590); HULD (1984: 110).

- B. Proto-Afroasiatic *\*rak<sup>ʔ</sup>-/\*rək<sup>ʔ</sup>-* “to sprinkle, to spray”: Proto-Semitic *\*rak<sup>ʔ</sup>-* (*\*rak<sup>ʔ</sup>-ah-*, *\*rak<sup>ʔ</sup>-ay-*) “to sprinkle, to spray” > Geez / Ethiopic *raḫḫa* “to sprinkle, to spray”, *raḫaya* “to sprinkle, to asperse, to sprinkle with holy water to drive out demons, to cleanse with holy water”; Tigrinya *räḫäyā* “to sprinkle, to sprinkle holy water (on a place or a person)”; Amharic *räḫḫä* “to sprinkle water”; Gurage *reḫḫä* “to spray water, to sprinkle water”; Argobba *räḫḫa* “to sprinkle water”. LESLAU (1987: 472 and 473).

BUCK 1949: 1.75 rain; 15.83 wet, damp.

#### 605. Proto-Nostratic *\*rat<sup>[h]</sup>-/\*rət<sup>[h]</sup>-* “to turn, to roll; to run”:

- A. Proto-Indo-European *\*ret<sup>[h]</sup>-/\*rot<sup>[h]</sup>-* “to turn, to roll; to run”: Sanskrit *rātha-ḥ* “chariot, especially a two-wheeled war-chariot; wagon, cart”; Avestan *raθa-* “wagon, chariot”; Latin *rota* “wheel”, *rotundus* “round, circular”;

Umbrian *amb-retuto* “to walk around”; Old Irish *roth* “wheel”, *rethid* “to run, to flow”, *riuth* “running”; Welsh *rhod* “wheel”, *rhedaf* “to run”; Old English *raðe*, *ræd* “swift”; Old High German *rado*, *rato* “quickly”; Lithuanian *rātas* “wheel”, *rātai* “cart, vehicle”, *ratėlis* “spinning-wheel”, *ritù*, *risti* “to roll”. POKORNY (1959: 866) *\*ret(h)-* “to run, to roll”, *\*roto-* “wheel”; WALDE (1927-1932: II, 368) *\*reth-*; MANN (1984-1987: 1073) *\*ret-* “to run, to roll, to go”, 1090-1091 *\*rot-* “quick; rush”, 1091 *\*rot-*, *\*rotos* (*\*rothos*) “wheel, vehicle”; WATKINS (1985: 54) *\*ret-* “to turn, to roll”; GAMKRELIDZE - IVANOV (1984: I, 216) *\*ret[h]-*, II, 718-719 *\*rot[h]o-*.

- B. Proto-Afroasiatic *\*rat[h]-*/*\*rət[h]-* “to turn, to roll; to run”: Semitic: Arabic *rata’a* “to go away, to depart; to gallop with short steps”, *rataka* “to run with short steps, to trot”. Proto-Southern Cushitic *\*rat-* “to continue onward” > Ma’a *iritimé/iritimé* “crossing, ford”; Dahalo *rat-* “to walk about”, *raṭtið-* “to continue (something)”. EHRET (1980: 219).

BUCK 1949: 10.46 run (vb.); 10.75 chariot, wagon, cart; 10.76 wheel.

606. Proto-Nostratic *\*was-/wəs-* “to add (to), to augment, to increase, to heap up”:

- A. Proto-Kartvelian *\*ws<sub>1</sub>-* “to fill (up)”: Georgian *vs-eba* “to fill (up)”; Mingrelian (*p*)š- “to fill (up)”; Zan *pš-* “to fill (up)”; Svan *li-gwš-ile* “to fill something”, *gweši* “full”. KLIMOV (1964: 86); SCHMIDT (1962: 110); FÄHN-RICH (1994: 231).
- B. Proto-Afroasiatic *\*was-/wəs-* “to add (to), to augment, to increase, to heap up”: Proto-Semitic *\*was-* (*\*was-ak[h]-*, *\*was-akʿ-*) “to add (to), to augment, to increase, to heap up” > Geez / Ethiopic *wassaka* “to add, to join to, to augment, to supplement, to increase”; Tigrinya *wässäkä* “to add”; Tigre *wässäka* “to add”; Amharic *wässäkä* “to add”; Arabic *wasaka* “to store, to heap up, to load freight”.

BUCK 1949: 13.21 full.

607. Proto-Nostratic *\*mar-/mər-* “to strive against, to oppose”:

- A. Proto-Kartvelian *\*maržw-* “to conquer, to vanquish, to defeat, to overcome”: Georgian *maržv-eba* “to conquer, to vanquish, to defeat, to overcome”; Mingrelian *moržgv-* “to conquer, to vanquish, to defeat, to overcome”, *moržgvi*, *maržgvi* “victory, success”; Svan *li-murž-i* “to help somebody” (Georgian loan). KLIMOV (1964: 128); SCHMIDT (1962: 122-123).
- B. Proto-Afroasiatic *\*mar-/mər-* “to oppose, to contend with, to dispute”: Proto-Semitic *\*mar-ad-* “to revolt, to rebel, to assail, to attack” > Arabic *marada* “to be refractory, recalcitrant, rebellious; to revolt, to rebel”; Epigraphic South Arabian *mrd* “(warlike) incursion”; Hebrew *mārað* “to rebel”, *mereð* “rebellion, revolt”; Syriac *mārað* “to rebel, to escape, to

resist, to prevail”; Geez / Ethiopic *marrada* “to leap, to hasten, to walk fast, to run about, to rush in, to attack, to bother, to annoy”, (with reduplication of third radical) *mardada* “to hasten”; Tigrinya *märrädä* “incursion, raid, pillage”; Amharic *märrädä* “to hasten, to raid, to pillage”. MURTONEN (1989: 264). Proto-Semitic *\*mar-ay-* “to argue, to rebel against, to contend with” > Arabic (base) *mry* “to wrangle, to argue, to dispute”; Hebrew *mārāh* “to be contentious, refractory, rebellious”; Syriac *mārā* “to contend with”. MURTONEN (1989: 265).

- C. Dravidian: Tamil *maṛam* “valor, bravery, anger, wrath, enmity, hatred, strength, power, victory, war, killing, murder”, *maṛal* “hate, enmity, disagreement, fight, war, death”, *maṛalu* (*maṛali-*) “to oppose, to give fight, to kill”, *maṛavōṇ* “warrior”; Malayalam *maṛam* “disagreement, war”, *maṛal* “death”. BURROW - EMENEAU (1984: 423, no. 4763).

BUCK 1949: 20.11 fight (vb.); 20.13 war; 20.41 victory.

608. Proto-Nostratic *\*dag-/dæg-* “to put, to place, to set; to stand”:

- A. Proto-Indo-European *\*d<sup>[h]</sup>eg<sup>[h]</sup>-om-*, *\*d<sup>[h]</sup>g<sup>[h]</sup>-om-* “earth, ground; human being”: Sanskrit (*\*d<sup>[h]</sup>g<sup>[h]</sup>-om-* > *\*džham-* > *\*džham-* > *\*tšam-* >) *kṣam-* “earth, ground”; Greek *χθών* “earth, ground; a particular land or country”, *χαμαί* “on the ground”; Albanian *dhe* “earth, land”; Latin *humus* “earth, ground, soil”, *homō* “human being, man”; Gothic *guma* “man”; Old English *guma* “man, hero”; Old Irish *dú* “place”, *duine* “person”; Old Church Slavonic *zemlja* “earth”; Old Lithuanian *žmuo* “human being, person”; Tocharian A *tkam*, B *kem* “earth, ground”; Hittite *te-(e)-kán* “earth, ground”, *da-ga-(a)-an* “to the ground”; Hieroglyphic Luwian *takami-* “earth, land”; Luwian *ti-ya-am-mi-iš* “earth”. The unextended stem *\*d<sup>[h]</sup>jog<sup>[h]</sup>-* may possibly be preserved in Hittite (dat.-loc.) *ta-ki-ya* as in *ta-ki-ya ... ta-ki-ya* “in this place ... in that place”, literally, “this one here ... that one there” (not, then, connected with *da-* “two” as suggested by KRONASSER 1966: I, 210). POKORNY (1959: 414-416) *\*ğhđem-*, *\*ğhđom-* “earth, ground”; WALDE (1927-1932: I, 662-664) *\*ğhđem-*, *\*ğhđom-*; MANN (1984-1987: 414) *\*ğhem-* (*\*ğham-*, *\*ğhm-*) “ground, earth; on the ground, on (to, in) the ground, down”; WATKINS (1985: 14) *\*dhghem-* “earth”, *\*(dh)ghm-on-* “earthling”; GAMKRELIDZE - IVANOV (1984: II, 475) *\*d<sup>[h]</sup>(e)ğ<sup>[h]</sup>om-*, II, 877; STURTEVANT (1951: 59, § 81, and 62, § 84) Indo-Hittite *\*d'eg'-*; VAN WINDEKENS (1976-1982: I, 506-507) *\*dheğhđom-*, *\*dhğhđom-*; BURROW (1973: 82); LEHMANN (1986b: 163). Semantic development as in Svan *gim* “earth, land, soil” (see below). According to KLIMOV (1991: 332), the following Kartvelian forms represent an early borrowing from Indo-European: Proto-Kartvelian *\*diywam* ~ *\*diyom* “black earth” > Georgian (dialectal) *dil(l)yvam* “black earth”, (toponym) *Diyom* a region inside of Tbilisi, occupying the so-called “Diyomian Field”; Svan *diywam* “black earth”.
- B. Proto-Kartvelian *\*dg-* “to stand”: Georgian *dg-/deg-* “to stand”, *dg-ma* “to put, to place, to set; to stand”, *a-dg-il* “place”; Mingrelian *dg-* “to stand”;

Zan *dg-* “to stand”; Svan *li-gne* “to stand”. KLIMOV (1964: 70); SCHMIDT (1962: 104-105); FÄHNRIK (1994: 231). Proto-Kartvelian *\*dgam-/dgm-* “to put, to place, to set; to stand”: Georgian *dgam-/dgm-* “to put, to place, to set”; Mingrelian *dgum-, dgim-* “to put, to place, to set”; Zan *dgim-* “to put, to place, to set”; Svan *li-gem* “to stand”, *gim* “earth, land, soil”. KLIMOV (1964: 71). Proto-Kartvelian *\*dg-in-* “to put, to place, to set”: Georgian *dgim-/dgen-* “to put, to place, to set”; Mingrelian *dgim-* “to put, to place, to set”; Zan *dgim-* “to put, to place, to set”. KLIMOV (1964: 71).

- C. Proto-Afroasiatic *\*dag-/dæg-* “to put, to place, to set; to stand”: Semitic: Arabic *dağana* “to remain, to stay, to abide; to get used to, to become accustomed to, to become habituated; to become tame, domesticated”. Berber: Ahaggar *édeh* (pl. *ideggen*) “place”; Zenaga *ežgen* “to put”. East Cushitic: Proto-Boni *\*deg-* “to settle down”.

- D. Uralic: Proto-Ugrian *\*taγz (\*takz)* “place, site” > (?) Ostyak / Xanty (Vah) *tāγi*, (Upper Demjanka) *tāχə*, (Obdorsk) *tāχα* “place, site”; (?) Hungarian *táj* “region, tract, country, land”. RÉDEI (1986-1988: 892).

- E. Sumerian *dag* “residence, dwelling-place”.

BUCK 1949: 1.21 earth, land; 12.11 place (sb.); 12.12 put (place, set, lay); 12.15 stand (vb. intr.). This replaces etymology #81. It should be noted here that KLIMOV (1991: 327 and 332) rejects the comparison of Proto-Kartvelian *\*tiqa* “earth, clay” (ILLIČ-SVITYČ writes *\*diqa*, as do GAMKRELIDZE - IVANOV 1984: II, 877) with Proto-Indo-European *\*dhǵhem-, \*dhǵhom-* “earth, ground” as proposed by ILLIČ-SVITYČ (1971: I, 220, no. 69). BLAŽEK (1992b: 131-132, no. 5); FÄHNRIK 1994: 254.

Meanwhile, etymology #81 should be rewritten as follows:

Proto-Nostratic *\*diq[ʰ]-/\*deq[ʰ]-* “to crush, to pound, to mold or knead (clay); (n.) earth, clay, mud”:

- A. Proto-Indo-European (*\*dik[ʰ]-* > [with progressive voicing assimilation] *\*dig[ʰ]-* >) *\*d[ʰ]ig[ʰ]-* (secondary full-grades in *\*d[ʰ]eyg[ʰ]-, \*d[ʰ]oyg[ʰ]-*) “to pound, to mold (clay), to knead (dough); (n.) clay”: Sanskrit *déhmi* “to smear, to anoint, to plaster”, *dehí* “mound, bank, surrounding wall”; Avestan *daēza-* “wall (originally made of clay or mud bricks)”; Greek *τεῖχος* “a wall, especially a wall around a city”, *τοῖχος* “the wall of a house or court”; Latin (with *n*-infix) *figō* “to shape, to fashion, to form, to mold”; *figūra* “form, shape, figure, size”, *figulus* “a worker in clay, a potter”; Oscan *feihúss* “walls”; Gothic *digan* “to knead, to form out of clay”, *daigs* “dough”; Old Icelandic *deig* “dough”; Old English *dæg* “dough”; Lithuanian *dýžti* “to beat soundly”; Old Church Slavonic *zīdō, zbdati* “to build”, *zbdā* “wall”; Ukrainian *d’ižá* “baker’s trough”. POKORNY (1959: 244-245) *\*dheigh-* “to knead clay”; WALDE (1927-1932: I, 833-834) *\*dheigh-*; MANN (1984-1987: 180) *\*dheigh-* “to shape, to earth up; form, wall”, 191 *\*dhiğh-*, 195 *\*dhoiğhos, -om, -is, -iə* “shape, mould; shaper”; WATKINS (1985: 13) *\*dheigh-* “to form, to build”; GAMKRELIDZE - IVANOV (1984: I, 412, II, 707, II, 884) *\*d[ʰ]eiğ[ʰ]-* “clay”; MAYRHOFFER (1956-1980:

II, 62 and 65); FRISK (1970-1973: II, 865-866); FEIST (1939: 114 and 118-119); LEHMANN (1986b: 87 and 90).

- B. Proto-Kartvelian *\*diq<sup>[h]</sup>a* "earth, clay": Old Georgian *tiqa* "earth, clay, mud" (Modern Georgian *tixa*); Mingrelian *dixa*, *dexa* "soil, ground, earth"; Laz (*n*)*dixa* "earth". GAMKRELIDZE - IVANOV (1984: II, 877) *\*diqa*; KLIMOV (1964: 94-95) *\*tiqa*.
- C. Proto-Afroasiatic *\*dak<sup>[h]</sup>-*/*\*dāk<sup>[h]</sup>-* "to crush, to pulverize, to mix, to knead (clay)": Proto-Semitic *\*dak<sup>[h]</sup>-ak<sup>[h]</sup>-* "to mix, to crush, to flatten" > Arabic *dakka* "to make flat, level, or even; to smooth, to level, to ram, to stamp, to tamp (earth, the ground, a road); to press down, to beat down, to weigh down; to demolish, to devastate, to destroy, to ruin; to mix, to mingle; to be crushed, to be leveled", *dakk* "level ground; devastation, destruction, ruin"; Akkadian *dakāku* "to crush". Proto-Semitic *\*dak<sup>[h]</sup>-al-* "to knead clay; to tread, to tread down" > Arabic *dakala* "to knead clay; to tread, to tread down", *dakala-t* "thin clay or loam". Proto-Semitic *\*dak<sup>[h]</sup>-aw/y-* "to crush" > Hebrew *dāḫāh* "to crush, to be crushed". Proto-Semitic *\*dak<sup>[h]</sup>-aʔ-* "to crush" > Hebrew *dāḫā* "to crush", *dakkā* "dust (as pulverized)". Proto-Semitic *\*da-wa-k<sup>[h]</sup>-* "to pound, to crush" > Arabic *dāka* "to grind, to pound"; Hebrew *dūḫ* "to pound, to beat (in a mortar)"; Akkadian *dāku* "to kill"; Ugaritic *dk* "to pound, to mix". MURTONEN (1989: 146 and 148).
- D. Dravidian: Konḍa *tig-* "to press down hard, to lay pressure on"; Pengo *tig-* (*tikt-*) "to push"; Maṇḍa *tig-* "to push". BURROW - EMENEAU (1984: 278, no. 3205).
- E. (?) Sumerian *dih* "to press, to push".
- BUCK 1949: 1.214 mud; 5.54 knead; 5.56 grind; 7.27 wall; 9.73 clay. FÄHN-RICH (1994: 254) compares Sumerian *dih* "(stone) slab for molding clay, stone" with the Kartvelian forms.

#### 609. Proto-Nostratic *\*t<sup>[h]</sup>ik<sup>[h]</sup>-*/*\*t<sup>[h]</sup>ek<sup>[h]</sup>-* "to shine, to glow, to burn":

- A. Proto-Afroasiatic *\*t<sup>[h]</sup>ak<sup>[h]</sup>-*/*\*t<sup>[h]</sup>ək<sup>[h]</sup>-* "to glow, to burn; to kindle, to ignite": Semitic: Geez / Ethiopic *takk<sup>w</sup>asa* "to ignite, to set on fire, to burn" (probably from Amharic); Tigre *täksa* "to cauterize"; Tigrinya *täkk<sup>w</sup>äsä* "to burn, to brand cattle"; Amharic *täkk<sup>w</sup>äsä* "to burn"; Gurage *täkäsä* "to light a fire". LESLAU (1987: 573). Egyptian *tk* "to burn, to kindle", *tk3* "torch, candle, flame; to illumine", *tk3w* "rite of torch burning"; Coptic *tök* "to kindle (fire), to bake", *tik* "spark", *intök* "oven, furnace", *tōč* "to bake". FAULKNER (1962: 301-302, 302); ERMAN - GRAPOW (1921: 207 and 1925-1963: 5, 331-332, 332-333); ČERNÝ (1976: 184); VYČICHL (1983: 212).
- B. Dravidian: Tamil *tikaṛ* "to shine (as diamonds), to glimmer (as stars), to be brilliant", *tikaṛcci*, *tikaṛvu* "brightness, luster, splendor", *tekaṛ* "to be manifest, to shine", *tikaṛttu* (*tikaṛtti-*) "to explain clearly, to make clear, to show clearly, to beautify, to adorn"; Malayalam *tikaṛuka* "to shine"; Malto *téqe* "to shine, to glow". BURROW - EMENEAU (1984: 278, no. 3200).

BUCK 1949: 1.82 flame (sb.); 1.85 burn (vb.); 1.86 light (vb.), kindle; 5.24 bake; 5.25 oven; 15.56 shine.

610. Proto-Nostratic *\*rag-/ræg-* “to stir, to move, to shake”:

- A. Proto-Indo-European *\*rog[h]-* “to stir, to move”: Middle High German *regen* “to stir, to move, to rouse”, *rege* “movement”; Swedish *ragla* “to toss, to sway”; Old Irish *ráig* “outburst”. MANN (1984-1987: 1085) *\*rogħos* “dashing, swift, bold”.
- B. Proto-Afroasiatic *\*rag-/ræg-* “to shake”: Proto-Semitic *rag-ap[h]-* “to stir, to shake; to shake off, to make fall; to fall down” > Aramaic *rəṣaṣ* “to stir, to shake”; Arabic *raḡafa* “to agitate, to convulse, to shake; to tremble, to quake, to be shaken”; Mehri *həgrūf* “to shiver, to shiver with fever”; Jibbāli *ergəf* “to shiver”; Harsūsi *argōf* “to shake (with fever)”; Geez / Ethiopic *ragafa* “to fall to the ground (fruit, leaves)”; Tigrinya *rägäfä* “to fall down (fruit, leaves)”; Gurage *rägäfä* “to fall down (fruit, leaves)”; Harari *rägäfä* “to fall to the ground (fruit, leaves)”; Amharic *räggäfä* “to fall to the ground (fruit, leaves)”; Argobba (*ar*)*raggäfa* “to shake”. Proto-Semitic *rag-aʒ-* “to shake, to quake, to tremble” > Hebrew *rāyaz* “to be agitated, to quake, to quiver; to be excited, perturbed”; Phoenician *rgz* “to disturb”; Aramaic *rəṣaz* “to tremble, to rage”. MURTONEN (1989: 393). Proto-Semitic *rag-ag-* “to quiver, to shake” > Arabic *raḡḡa* “to convulse, to shake, to rock, to tremble”; Mehri *rāttəg* “(ground) to quiver, to shake”. Proto-Semitic (reduplicated) *rag-rag-* “to tremble, to quake, to sway” > Arabic *raḡraḡa* “to tremble, to quake, to sway”. Proto-Semitic *rag-ad-* “to tremble” > Arabic *raḡada* “to tremble”.

BUCK 1949: 10.23 fall (vb.); 10.26 shake (vb. tr.).

611. Proto-Nostratic *\*rum-/rom-* “to grow or become dark, to darken”:

- A. Proto-Indo-European *\*remH-/romH-/r̥mH-* “dark, dark-colored”: Sanskrit *rāmā-ḥ* “dark, dark-colored, black”, *rāmī* “darkness, night”, *rātrī* (< *\*r̥mH-*) “night, darkness or stillness of night”; Middle High German *rām*, *rōm* “dirt, soot”, *rāmec*, *rāmig* “dirty, sooty”; Old English *rōmig* “sooty”. POKORNY (1959: 853) *\*rē-* “dark”, *\*rē-mo-*.
- B. Proto-Kartvelian *\*rum-* “to grow or become dark, to darken”: Georgian *rum-* “to grow or become dark, to darken”; Mingrelian *rum-* “to grow or become dark, to darken”. KLIMOV (1964: 157).
- C. Proto-Finno-Ugrian *\*r[ü]mke* “dark”: Lapp *râw'ke-* “to wink (the eyes)”, (Lule) *râm'ká-*, *râw'ká-* “to wink”, *râm'ko* “closed (only of the eyes)”; Cheremis / Mari (West) *rəm* “twilight, dusk”, (East) *rümbalge* “twilight, dusk”; Votyak / Udmurt *žomyt* “twilight, dusk”; Zyrian / Komi *rōmyd* “twilight, dusk”; Ostyak / Xanty *rimək* “dusk, twilight, dark, darkness”, *riməkəl* “to get dusk, to get dark”. COLLINDER (1977: 124 [1960: 413 *\*remke-*]); RÉDEI (1986-1988: 747) *\*r̥m̥z* “color”.

BUCK 1949: 1.62 darkness; 14.42 night; 15.63 dark (of color). DOLGOLPOLSKY (1992: 321, no. 38).

612. Proto-Nostratic *\*walʷ-/wəlʷ-* “to be open, to be vacant; (n.) open space, open land, field, meadow”:

- A. Proto-Indo-European *\*wel-* “field, meadow”: Hittite *wellu-* “meadow”; Greek ἡλύσιον “the Elysian fields”. GAMKRELIDZE - IVANOV (1984: II, 824) *\*uel-* “meadow”.
- B. Proto-Kartvelian *\*wel-* “field”: Georgian *vel-* “field”; Mingrelian *ve(l)-* “field”. KLIMOV (1964: 82-83).
- C. Dravidian: Tamil *veli* “to be open or public; to be vacant, empty; (n.) outside, open space, plain, space, intervening space, gap, room, openness, plainness, publicity”, *velippu* “outside, open space, enclosed space”; Malayalam *veli* “open field; notoriety; outside”; Telugu *veli* “the outside, exterior, excommunication; outside, external”, *velalu* “to go or come out, to start”, *velalucu* “to send out”, *velupala* “the outside, exterior; outside, external”, *vellaḍi* “open place; publicity; openness”, *veliparacu*, *velipuccu* “to make public or known”; Parji *valip-* (*valit-*) “to expel, to drive away”; Konḍa *veli* “outside”. BURROW - EMENEAU (1984: 500-501, no. 5498).
- D. Sumerian *ùl* “field, cultivated land, meadow”, *ul<sub>4</sub>* “field, meadow”, *úlul* “field, meadow, open land, steppe”.

BUCK 1949: 1.23 plain, field. BLAŽEK (1992b: 141, no. 30).

613. Proto-Nostratic *\*kʷam-/kʷəm-* “to burn slowly, to smolder; to be hot, to be red-hot, to be glowing; to smoke”:

- A. Proto-Kartvelian *\*kʷam-/kʷəm-* “to smoke”: Georgian *kʷem-a* “to smoke”; Mingrelian *kʷum-* “to smoke”; Zan *mkʷom-* “to smoke”; Svan *kʷām-* “to smoke”. KLIMOV (1964: 108-109) *\*kʷam-/kʷəm-*; SCHMIDT (1962: 119). Proto-Kartvelian *\*kʷamʷ-* “smoke”: Georgian *kʷamli* “smoke”; Mingrelian *kʷuma* “smoke”; Laz *kʷoma* “smoke”; Svan *kʷām* “smoke, smut”. KLIMOV (1964: 109) *\*kʷamʷ-*.
- B. Afroasiatic: Semitic: Akkadian *ḫamū* “to burn, to consume by fire”.
- C. Uralic: Proto-Finno-Volgaic *\*kūma* “hot, red-hot; fever” > Finnish *kuuma* “hot”, *kuume* “fever”, *kuumoitta-* “to make hot, to heat”, *kuumuus* “heat”; Estonian *kuum* “hot, red-hot”, *kuuma-* “to be red-hot, to glow”, *kuumata-* “to make red-hot”; Mordvin *kumoka* “fever”. RÉDEI (1986-1988: 675-676).
- D. Dravidian: Tamil *kumpu* (*kumpi-*) “to become charred (as food when boiled with insufficient fire)”, *kumai* “to be hot, sultry”; Malayalam *kumpal* “inward heat”, *kummu* expression descriptive of heat, *kumuṛuka*, *kumiruka* “to be hot, close”, *kumural* “oppressive heat”; Kannaḍa *kome* “to begin to burn (as fire or anger)”; Tuḷu *gumulu* “fire burning in embers”, *gumuluni* “to be hot, to feel hot (as in a fit or fever)”; Telugu *kummu* “smoldering

ashes", *kumulu* "to smolder, to burn slowly underneath without a flame, to be consumed inwardly, to grieve, to pine"; Gondi *kum* "smoke". BURROW - EMENEAU (1984: 159-160, no. 1752).

BUCK 1949: 1.83 smoke (sb.). BLAŽEK (1992b: 135-136, no. 14).

614. Proto-Nostratic *\*dur-/d̥or-* "sheep, ram":

A. Kartvelian: Georgian *dur-aq'* "yearly capricorn".

B. Proto-Afroasiatic *\*dər-* "sheep, ram": Omotic: Wolaita (Beke) *dürsa, dorsa* "sheep"; Oyda *duro, dorsa* "sheep"; Basketo *dōri* "sheep"; Doko *dori* "sheep"; Zayse *dorō* "sheep"; Koyra *dorō* "sheep"; She *dor, doy* "ram". Chadic: Hina *duru(p)* "a calf"; Mafa *dr̥ok* "ram".

BUCK 1949: 3.25 sheep; 3.26 ram. BLAŽEK (1992a: 115, no. 6).

615. Proto-Nostratic *\*dur-/d̥or-* "hole, opening":

A. Proto-Kartvelian *\*duro* "hole, hollow": Georgian *duro* "loop-hole"; Mingrelian *duru* "hollow, depression, hole, pit".

B. Proto-Dravidian *\*tor̥-* "hollow, hole, cavity (in a tree)": Kannada *toralu, toraḷe* "hole", *torē, ḍore* "hollow, hole"; Telugu *torā, torāṭa, torra* "hole, cavity (in a tree)"; Gondi *dora* "hole (in a tree)". BURROW - EMENEAU (1984: 310, no. 3533).

BUCK 1949: 12.85 hole. BLAŽEK (1992a: 115, no. 7 [note that, at 1992b: 130, BLAŽEK also compares Proto-Indo-European *\*dhur-* "to pierce", which is, indeed, quite possible; but cf. BOMHARD - KERNS 1994: 323-324, no. 144, for an alternative proposal]).

616. Proto-Nostratic *\*ʔab-/ʔəb-* "to be or become dry, to dry up, to dry out":

A. Proto-Kartvelian *\*abed-* "tinder": Georgian *abed-* "tinder"; Mingrelian *obed-* "tinder"; Zan *obed-* "tinder"; Svan *haböd-, habed-, hobed-* "tinder". KLIMOV (1964: 43).

B. Proto-Afroasiatic *\*ʔab-/ʔəb-* "to be or become dry, to dry up, to dry out": Proto-Semitic *\*ʔab-al-* "to dry up, to dry out" > Akkadian *abālu* "to dry up, to dry out", *ablu* "dry, dried" (said, for example, of wood as in "dry [fire]wood"); Hebrew *ʔāḇal* "to dry up". Egyptian *ibi* "to be thirsty", *ib* "thirsty man", *ibr* "thirst". FAULKNER (1962: 15); ERMAN - GRAPOW (1921: 9).

BUCK 1949: 5.15 thirst (sb.); 15.84 dry.

617. Proto-Nostratic *\*ʔib-/ʔəb-* "to lose (one's way or one's mind), to go astray":

A. Proto-Afroasiatic *\*ʔab-/ʔəb-* "to lose (one's way or one's mind), to go astray; to be lost": Proto-Semitic *\*ʔab-ad-* "to lose (one's way or one's



mind), to go astray; to be lost" > Arabic *'abada* "to roam in a state of wildness, to run wild, to be shy"; Hebrew *'āḇaḏ* "to perish, to vanish, to be lost"; Aramaic *'āḇaḏ* "to be lost"; Ugaritic *'bd* "perished"; Akkadian *abātu* "to destroy, to lay waste, to ruin"; Geez / Ethiopic *'abda*, *'abda* "to be insane, to become enraged, to rage, to be mad, to be out of one's mind, to become a fool, to be foolish"; Tigre *'abbāda* "to deceive", *'abd* "fool-hardy"; Tigrinya *'abbādā* "to entice with promises", *'abādā* "to go mad, to become insane"; Amharic *abbādä* "to go insane, to go mad". LESLAU (1987: 2-3); MURTONEN (1989: 79).

- B. Dravidian: *ēppirāci*, *ēppiyan* "simpleton, fool"; Kannaḍa *ēbrāsi*, *ebaḍa* "a foolish, silly man" (f. *ebaḍi*); Tuḷu *ebuḷante* "half-witted, silly"; Telugu *ebberāsi*, *ebrāsi* "a slovenly person". BURROW - EMENEAU 1984: 79, no. 803. Semantic development as in Geez / Ethiopic *'abda*, *'abda* "to be insane, to become enraged, to rage, to be mad, to be out of one's mind, to become a fool, to be foolish".

BUCK 1949: 17.22 foolish, stupid; 17.23 insane, mad, crazy.

#### 618. Proto-Nostratic *\*wan-/wən-* "to stay, to remain":

- A. Indo-European: Proto-Germanic *\*wunan* "to dwell, to abide, to remain" > Old Icelandic *una* "to dwell, to abide"; Old High German *wonēn* "to dwell, to remain"; Old Saxon *wunon*, *wonon* "to dwell, to remain"; Old English *wunian* "to dwell, to remain", *wuna* "habit, custom"; Old Frisian *wonia*, (w)*unia* "to dwell, to remain". Different from Proto-Indo-European *\*wen-* "to desire" (see below, no 619).
- B. Proto-Afroasiatic *\*wan-/wən-* "to stay, to remain": Semitic: Arabic *wanaka* "to dwell amongst". Egyptian *wnn* "to be, to exist"; Coptic *won* "to be". FAULKNER (1962: 62); ERMAN - GRAPOW (1921: 36); VYČIHL (1983: 233); ČERNÝ (1976: 212-213).
- C. Sumerian *unu*, *únu*, *unu*<sub>7</sub> "dwelling, residence; dwelling-place, place of residence".

BUCK 1949: 7.11 dwell; 9.91 be.

#### 619. Proto-Nostratic *\*win-/wen-* "to strive for, to wish for, to desire":

- A. Proto-Indo-European *\*wen-/won-/wṇ-* "to strive for, to wish for, to desire": Sanskrit *vánati*, *vanóti* "to like, to love, to wish, to desire; to gain, to acquire, to procure; to conquer, to win, to become master of, to possess", *vānas-* "longing, desire"; Avestan *vanaiti* "to win, to strive for, to conquer"; Latin *venus* "charm, loveliness, attractiveness; sexual love", *vēnor* "to hunt", *venia* "grace, indulgence, favor", *veneror* "to ask reverently, to beseech with awe; to revere, to respect, to worship, to honor"; Old Irish *fine* "a family"; Gothic *wēns* "hope", *winnan* "to suffer", *winna* "passion"; Old Icelandic *una* "to be content", *vinr* "friend", *yndi* "delight, happiness", *væna* "to give one hope", *ván* "hope, expectation", *vænn* "fine, beautiful",

*vinna* “to work, to labor, to do work”, *vinna* “work, labor”, *vinningr* “gain, profit”, *æskja* “to wish”; Old English *wynn* “joy”, *wine* “friend”, *wēnan* “to hope, to expect”, *wēn*, *wēnung* “hope, expectation”, *winnan* “to toil, to endure hardship, to suffer”, *gewinnan* “to gain, to acquire, to conquer, to take”, *winn* “labor, effort, hardship”, *wýscan* “to wish”; Old Frisian *wēna* “to hope, to expect”, *wēn* “opinion”, *winna* “to obtain”; Old Saxon *wān* “hope”, *winnan* “to suffer, to win”; Old High German *wān* “opinion, hope”, *gewinnan* “to gain by labor”, *wunna* “joy”, *wunsken* “to wish”. POKORNY (1959: 1146-1147) \**uen-*, \**uenā-* “to strive for”; WALDE (1927-1932: I, 258-260) \**uen-*; MANN (1984-1987: 1512-1513) \**uēn-* “desire, hope, favor, outlook, charm”, 1514 \**uenos*, *-es* “desire”, \**uēnskō* “to desire”, \**uō-*, 1574 \**uon-* “desire”; WATKINS (1985: 76) \**wen-* “to desire, to strive for”; ERNOUT - MEILLET (1979: 719, 720-721, 721-722).

- B. Proto-Afroasiatic \**wan-/wān-* “to be pleasant, joyful”: Egyptian *wnf* “to be joyful, to rejoice”; Coptic *unof* “to rejoice”. FAULKNER (1962: 61-62); ERMAN - GRAPOW (1921: 36); VYICHL (1983: 235); ČERNÝ (1976: 214). Proto-Southern Cushitic \**win-* or \**wan-* “nice, pleasant, comfortable” > Iraqw *wanana* “soft, gentle”, *wan'es-* “to soften”, *wanana'ut-* “to be loose”; Dahalo *wine* “good, clean”. EHRET (1980: 314). Semantic development as in Old High German *wunna* “great joy, bliss” and Old English *wynn* “joy, rapture, pleasure, delight, gladness”, *wynsum* “pleasant, delightful, joyful, merry”.

- C. Dravidian: Tamil *vēṇṭu* (*vēṇṭi-*) “to want, to desire, to beg, to entreat, to request”, *vēṇṭiyavan* “friend, well-wisher”, *vēṇ* “desire”; Malayalam *vēṇam*, *vēṇṭum* “it must, ought, is desired”, *vēṇ* “necessary”, *vēṇṭa* “useful, required”; Kannaḍa *bēṇa*, *bēṇṭa* “longings, sexual passion, amorous pastime”; Telugu *vēḍu* “to pray, to beg, to ask, to wish, to desire”, *vēḍuka* “pleasure, joy, desire, wish, fun”. BURROW - EMENEAU (1984: 504-505, no. 5528).

BUCK 1949: 16.22 joy; 16.61 will, wish (vb.); 16.62 desire (vb.); 20.41 victory. BLAŽEK 1992c: 246-247, no. 6.

## 620. Proto-Nostratic \**wan-/wān-* “share, portion, (period of) time”:

- A. Kartvelian: Svan (*w*)*ona* “time”.

- B. Afroasiatic: Egyptian *wnw-t* “hour, time”; Coptic *unu* “hour”. FAULKNER (1962: 61); ERMAN - GRAPOW (1921: 36); VYICHL (1983: 233); ČERNÝ (1976: 214).

- C. Dravidian: Kannaḍa *ontu*, *vantu*, *vanti* “a turn, time”, *ontu* “share, portion”; Tuḷu *onti* “a turn, time”, *ontu* “a turn, time; once”, *ontigē* “a contribution”; Telugu *vantu* “share, portion, a turn by rotation, a round”. BURROW - EMENEAU (1984: 93, no. 979).

BUCK 1949: 14.11 time.

621. Proto-Nostratic *\*wan-/wən-* “first, first-born, eldest”:

- A. Afroasiatic: Proto-Highland East Cushitic *\*wanaa* “first” > Burji *wanáy* “first-born”, *wanawwa* “eldest sister”, *wanay*, *wonáy* “eldest brother”; Kambata *wana(a) beetu* “first-born” (*beetu* = “child”), *wanabii* “first”. HUDSON (1989: 33, 64-65, 135); SASSE (1982: 190).
- B. Uralic: Proto-Finno-Permian *\*wanša* “old” > Finnish *vanha* “old”, *vanhemmat* “parents”; Estonian *vana* “old”; Votyak / Udmurt *vuž* “old”; Zyrian / Komi *važ* “old”. RÉDEI (1986-1988: 813). (?) Proto-Finno-Ugrian *\*wšn3* “old” > Zyrian / Komi *vener* “old”; Hungarian *vén* “old”. RÉDEI (1986-1988: 589-590).
- C. Dravidian: Kolami *vanna* “brother’s wife”; Naikri *vanna* “older brother’s wife”; (?) Konda *oni* “older brother’s wife, maternal uncle’s daughter (older than person concerned)”; (?) Pengo *oni* “older brother’s wife”. BURROW - EMENEAU (1984: 474, no. 5251).
- BUCK 1949: 13.34 first; 14.15 old.

622. Proto-Nostratic *\*p<sup>[h]</sup>jar-/p<sup>[h]</sup>ər-* “to be fond of, to care for, to feel affection for; to be pleased, happy, satisfied, or delighted with”:

- A. Proto-Indo-European *\*p<sup>[h]</sup>reyH-/p<sup>[h]</sup>royH-/p<sup>[h]</sup>riH-* (> *\*p<sup>[h]</sup>ri-*) “to be fond of, to care for, to feel affection for; to be pleased, happy, satisfied, or delighted with”: Sanskrit *prīṇāti* “to please, to gladden, to delight, to gratify, to cheer, to comfort, to soothe, to propitiate; to be pleased or satisfied with, to delight in, to enjoy”, *prīyate* “to be pleased”, *priyá-h* “beloved, dear”, *premán-* “love, affection, kindness, fondness”, *préyas-* “dearer, more agreeable; a lover, a dear friend” *prīti-h* “pleasure, joy, gladness, satisfaction”; Avestan *frīnāti* “to love, to praise”, *fryō* “dear”; Welsh *rhydd* “free”; Gothic *freis* “free”, *frijei*, *frei-hals* “freedom”, *frijon* “love”, *freidjan* “to take care of”, *frijonds* “friend”, *friapwa* “showing love”; Old Icelandic *frjá* “to love”, *frjál* “love”, *fríða* “to adorn”, *fríðr* “beautiful, handsome, fine”, *frændi* “kinsman”, *fríða* “to pacify”, *fríðr* “peace”, *fríðill* “lover”; Old English *frēo* “free; noble; joyful”, *frēond* “friend; relative; lover”, *frēod* “affection, friendship, good-will, peace”, *frēogan*, *frīgan* “to free, to love”, *frēo* “lady, woman”, *friodu* “peace”; Old High German *vrieten* “to cherish”; Old Church Slav *prějō*, *prijati* “to be favorable”, *prijatelb* “friend”, *prijaznъ* “love”; Latvian *priēks* “joy”. POKORNY (1959: 844) *\*prāi-*, *\*prai-*, *\*prī-* (*\*pri-*) “to like”; WALDE (1927-1932: II, 86-87) *\*prēi-*, *\*prai-*, *\*prī-* (*\*pri-*); MANN (1984-1987: 988) *\*prija-* (*\*priiā-*, *\*priiā-*) “dear”, 988-989 *\*priiāiō* “to like, to love, to favor”, 989 *\*priiāt-* (*\*priiāt-*, *\*prīt-*) “beloved, dear”, 989 *\*priios*; WATKINS (1985: 53) *\*prī-* “to love” (contracted from *\*priā-*); MAYRHOFER (1956-1980: II, 378-380 and 380); LEHMANN (1986b: 127, 127-128, 128, and 128-129).
- B. Proto-Afroasiatic *\*p<sup>[h]</sup>jar-/p<sup>[h]</sup>ər-* “to be fond of, to care for, to feel affection for; to be pleased, happy, satisfied, or delighted with”: Proto-Semitic *\*p<sup>[h]</sup>jar-ah-* “to be glad, happy, delighted; to rejoice” > Arabic *fariha* “to be

glad, happy, delighted; to rejoice; to be gay, merry, cheerful", *farah* "joy, gladness, glee, gaiety, hilarity, mirth, exhilaration, merriment, joy", *farha* "joy", *fariḥ*, *fāriḥ* "merry, gay, cheerful, joyful, glad, delighted, happy"; Mehri *firəḥ* "to be happy", *fərḥāt* "happiness", *fōrəḥ* "to make happy"; Jibbālī *fērəḥ* "to be happy, pleased", *effrāḥ* "to make happy", *farḥ*, *fərḥāt* "happiness"; Ḥarsūsi *fēreḥ* "to rejoice, to be happy", *ferḥét* "happiness", *fēreḥ* "to make happy". Berber: Tuareg *ifrar* "to be good". (?) Cushitic: perhaps Oromo *fira* "relative" (> Burji *fira* "friend, relative"; Gedeo *fira* "relative"), assuming semantic development as in Old Icelandic *frændi* "kinsman" or Old English *frēond* "friend; relative; lover", cited above.

- C. Dravidian: *pari* "to be affectionate", *pari* "love, affection", *parivu* "affection, love, devotion, piety, delight, pleasure"; Malayalam *parivu* "love"; Kannaḍa *paraḷiga* "paramour"; Telugu *perima* "love, affection". BURROW - EMENEAU (1984: 353, no. 3984).

BUCK 1949: 16.27 love (sb.; vb.); 16.71 good (adj.). BLAŽEK (1992c: 245, no. 2).

623. Proto-Nostratic *\*hat[h]-/\*ḥat[h]-* "to tear, split, or break apart":

- A. Proto-Kartvelian *\*xt[h]k[h]-* "to break, to burst, to split, to snap" (intr.): Georgian *xekt-* "to break, to burst, to split, to snap" (intr.); Zan *stik-*, *st'ik-* "to break, to burst, to split, to snap" (intr.). KLIMOV (1964: 260) *\*xtk-*.
- B. Proto-Afroasiatic *\*hat[h]-/\*ḥat[h]-* "to split or tear off or apart, to shatter, to destroy": Proto-Semitic *\*hat[h]-at[h]-* "to split, break, or tear off or apart; to shatter" > Arabic *ḥatta* "to wipe, to rub off; to peel, to shell; to strip leaves from a branch; to fall off", *ḥitta* "piece, bit, morsel", (reduplicated in) *ḥathata* "to fall off", *ḥutra* "small piece, bit, morsel"; Jibbālī *ḥett* "to gnaw (as, for example, a mouse)"; Hebrew *ḥāṯaṯ* "to be shattered, to be broken, to be dashed to pieces, to be struck down; to be filled with terror", *məḥittāḥ* "terror, destruction, ruin". (LESLAU [1989: 248] also compares Geez / Ethiopic *ḥatata* "to search, to search out, to inquire, to question, to ask, to interrogate a witness, to investigate, to explore, to examine, to beseech, to scrutinize, to discern, to adjudicate", assuming development from "to scrape, to break" to "to discern, to adjudicate" as in French *trancher* "to cut, to settle".) Proto-Semitic *\*xat[h]-ap[h]-* "to split, break, or tear off or apart; to shatter" > Aramaic *ḥəṯaṯ* "to seize, to tear off"; Syriac *ḥəṯaṯ* "to break, to shatter"; Hebrew *ḥāṯaṯ* "to seize, to snatch away"; Akkadian *ḥatāpu* "to slaughter". MURTONEN (1989: 202). Egyptian *ḥtm* "to perish, to be destroyed (intr.); to destroy (tr.)"; Coptic *hōtm* "to perish". FAULKNER (1962: 180); ERMAN - GRAPOW (1921: 119); VYČIHL (1983: 316). Proto-Southern Cushitic *\*het-* "to plunder" > Iraqw *het-*, *hit-* "to destroy", *hitim-* "to be stunted". EHRET (1980: 335).

BUCK 1949: 11.27 destroy.

624. Proto-Nostratic *\*q'ab-/q'əb-* "jaw":

- A. Proto-Indo-European *\*k'eb[h]/k'ob[h]-* "to munch, to chew; jaw": Old Irish *gop* (Modern Irish *gob*) "beak, mouth"; German *Kebe* "fish-gill"; Lithuanian *žėbiu, žėbėti* "to munch"; Czech *žábra* "fish-gill". POKORNY (1959: 382) *\*ġep(h)-, \*ġebh-* "jaw, mouth; to eat"; WALDE (1927-1932:I, 570-571) *\*ġep(h)-, \*ġebh-*; MANN (1984-1987: 389) *\*ġebh- (\*ġebhl-, \*ġobh-)* "jaw"; WATKINS (1985: 19) *\*ġep(h)-, \*ġebh-* "jaw, mouth". The above Indo-European forms should thus be removed from etymology no. 288 (BOMHARD - KERNS 1994: 443-444), Proto-Nostratic *\*k'ab-/k'əb-* "to seize, to take hold of; to seize with the teeth, to bite".
- B. Proto-Kartvelian *\*q'ba-* "jawbone": Georgian *q'ba* "jawbone"; Svan *q'ab, hə-q'ba* "cheek". KLIMOV (1964: 209) *\*q'ba-*; SCHMIDT (1962: 140); FÄHNRIK (1994: 222).
- BUCK 1949: 4.207 jaw.

625. Proto-Nostratic *\*q'an-/q'an-* "field, land, (open) country":

- A. Proto-Kartvelian *\*q'ana-* "(corn-)field": Georgian *q'ana-* "(corn-)field, plowed field" (in Old Georgian, *q'ana-* means "earth"); Mingrelian *vana-* "(corn-)field"; Zan *q'ona-, 'ona-, jona-* "(corn-)field". KLIMOV (1964: 208) *\*q'ana-*; SCHMIDT (1962: 140); FÄHNRIK (1994: 225).
- B. Afroasiatic: (?) Egyptian *qn* used as a designation for plants in a field. ERMAN - GRAPOW (1926-1963: 5, 47); VYCHICL (1983: 130).
- C. Uralic: Proto-Finno-Permian *\*kentä* "field, meadow, pasture" > Finnish *kenttä* "field"; Lapp *gied'de* "meadow"; Votyak / Udmurt *gid, gid'* "stall, barnyard"; Zyrian / Komi *gid* "stall, stall for sheep, pigpen". RÉDEI (1986-1988: 658-659).
- D. Sumerian *gán* "field", *gán* "planting, cultivation", *gána* "field, land, country, area, region", *gán-zi, gán-zi-da* "cultivation, tillage", *gán-zi<sup>sar</sup>* "a plant".

BUCK 1949: 1.23 plain, field; 8.12 field (for cultivation).

626. Proto-Nostratic *\*k'an-/k'an-* "jaw, cheek":

- A. Proto-Indo-European *\*k'en-u-* "jaw, cheek": Sanskrit (with secondary *h-* instead of *j-*) *hānu-h* "jaw, cheek"; Avestan *zānu-* "jaw, chin"; Greek *γένυς* "jaw, cheek", *γνάθος* "the lower jaw"; Armenian *cnaui* "chin, jaw"; Latin *gena* "cheek, cheeks and chin", (pl.) *genae* "jaws"; Old Irish *gin, giun* "mouth"; Welsh *gen* "cheek, jaw", *genau* "mouth"; Breton *gén* "cheek", *genu, genaw* "mouth"; Gothic *kinnus* "cheek"; Old Icelandic *kinn* "cheek"; Old English *cinn* "chin"; Old Saxon *kinni* "jaw, chin"; Old High German *kinni* "jaw, chin", *chinne* "jaws"; Lithuanian *žándas* "jaw"; Latvian *zuòds* "chin, jaw"; Tocharian A (dual) *śanw-e-ṃ* "jaws". POKORNY (1959: 381-382) *\*ġenu-* and *(\*ġenadh-)* *\*ġonadh-* "jawbone, chin"; WALDE

(1927-1932: I, 587) \**ġ(h)enu-s*; MANN (1984-1987: 391) \**ġendh-* “wedge, wedge-shape, angle, jaw”, 393-394 \**ġenus* (\**ġenuə*, \**ġenəuə*, \**ġenə*) “jaw, jowl, angle of the face, angle, wedge”, 402 \**ġnadhōs* (\**ġandhōs*) “jaw”; GAMKRELIDZE - IVANOV (1984: I, 183) \**k'enu-s*, II, 815 \**k'enu-*; FRISK (1970-1973: I, 298 and 316); MAYRHOFER (1956-1980: III, 574-575); LEHMANN (1986b: 218-219).

B. Dravidian: Tamil *kannam* “cheek, ear”; Malayalam *kannam* “cheek, jaw”; Kannada *kanna* “the upper cheek”. BURROW - EMENEAU (1984: 132, no. 1413).

BUCK 1949: 4.207 jaw; 4.208 cheek; 4.209 chin.

627. Proto-Nostratic \**k'an-/k'an-* “to press together, to compress; to be pressed or crowded together; to be thick, dense, fat, abundant, much”:

A. Proto-Indo-European (\**k'en-/k'on-/k'n-*) “to press together, to compress”: German *kneifen* “to pinch, to squeeze”, *Knorr* “knot”; Old Icelandic *knapp* “knob”, *kneppa* “to press, to hug”, *knía* “to knock, to strike”, *knoka* “to knock, to thump”, *knosa* “to bruise, to beat”, *knoða* “to knead”, *knútr* “knot”, *knýja* “to knock, to press; to drive onward; to struggle on, to press on”, *knýkill* “small knot, protuberance”, *knýlla* “to beat, to strike”, *knýttr* “knotted, crippled”, *knöttr* “ball”; Norwegian *knast* “knot”; Swedish *knagg* “knot”; Old English *cnedan* “to knead”, *cnotta* “knot”, *cnocian* “to knock (at the door); to pound (in a mortar)”, *cnossian* “to dash, to strike”, *cnūwian* “to pound (in a mortar)”, *cnýssan* “to beat against, to dash against, to toss (storm ... ship); to defeat, to crush (in battle), to overcome (temptation); to oppress, to trouble, to afflict”; Middle English *cnap* “knob”, *cnag* “knot, peg”, *cnarre* “knot”; Middle Dutch *knolle* “clod, ball”; Polish *gnębić* “to press, to squeeze”; Lithuanian *gnýbiu*, *gnýbti* “to pinch, to nip, to bite”. POKORNY (1959: 370-373) \**gen-* “to press together, to compress”; WALDE (1927-1932: I, 580-583) \**gen-*; MANN (1984-1987: 285) \**gnāuos* “pressing, urgent; activity”, 285 \**gnāuiō* (\**gnāūāiō*) “to press”, 285 \**gneuġ-* (\**gnūġ-*) “knob, nape; compression, ball”, 286 \**gnōd-* “knot, lump”, 286 \**gnōt-* “knot, lump”, 286 \**gnuġalos*, *-is* (\**gnuġil-*) “lump, knob, fist, club”, 286 \**gnuġos*, *-iom*, *-iə* “knot; knuckle-bone, nape”, 286 \**gnūs-* “to squeeze, to force, to press”, 286-287 \**gnutos* (*-ō(n)*), \**gnutalos* “lump, knot”, 399 \**ġneuguġō*, *-iō* “to press, to squeeze”, 399 \**ġnobos* (\**ġnobil-*, \**ġnob-*) (?) “knot, knob”, 401 \**ġnuuō* “to press, to penetrate”; WATKINS (1985: 19) \**gen-* “to compress into a ball”. Two different stems should be set up for Proto-Indo-European: (1) \**k'(e)n-* “to press together, to compress” and (2) \**k'(e)n-* “to bend; to bend or fold (together); to crack, to split; to tie or bind together” (see below, replacement for etymology #311). Several of the derivatives of these two stems overlap semantically.

B. Afroasiatic: Egyptian *qn-w* “much, many; very great”, *qn*, *qny* “to be or become fat”, *qn*, *qny* “fat”; (reduplicated) *qnqn* “to beat, to pound up (medicaments), to beat out, to flatten out”, *qnqnyt* “mallet” (?); Coptic

*knne, keni* “to be fat, sweet”. FAULKNER (1962: 279 and 280); ERMAN - GRAPOW (1921: 190 and 1926-1963: 5, 46-47); VYČIHL (1983: 82-83); ČERNÝ (1976: 59).

- C. Dravidian: Tamil *kaṇa* “to be heavy, stout, abundant”, *kaṇam* “thickness, heaviness”, *kaṇati* “thickness, heaviness, gravity”, *kaṇappu* “being stout”, *kaṇai* “to be crowded, intense”, *kaṇai* “density, abundance”, *kaṇaivu* “closeness, thickness”, *kaṇal* (*kaṇalv-*, *kaṇaṇr-*) “to be close, crowded, densely packed”; Malayalam *kanam* “compact, hard”, *kanakka* “to become solid, hard, heavy”; Toda *ken* “densely (of shade)(in songs)”. BURROW - EMENEAU (1984: 130, no. 1404). The Dravidian forms are phonologically ambiguous and may go here instead of with etymology #313 (BOMHARD - KERNS 1994: 468), Proto-Nostratic *\*gʷan-/gʷən-* “to swell, to abound”.

BUCK 1949: 9.192 knot (sb.); 12.63 thick (in dimension); 12.64 thick (in density); 13.15 much; many.

#### 628. Proto-Nostratic *\*kʷan-/kʷən-* “to complete, to finish”:

- A. Afroasiatic: Egyptian *qn* “to finish, to complete, to accomplish”; Coptic *kēn* “to cease, to finish”. FAULKNER (1962: 279); ERMAN - GRAPOW (1921: 190); VYČIHL (1983: 82); ČERNÝ (1976: 59).

- B. Sumerian *gan* “to complete, to finish”.

BUCK 1949: 14.27 finish (vb.).

#### 629. Proto-Nostratic *\*qʷin-/qʷen-* “to freeze, to be or become cold”:

- A. Proto-Kartvelian *\*qʷin-* “to freeze”: Georgian *qʷin-* “to freeze”; Mingrelian *ʷin-* “to freeze”; Laz *qʷin-* “to freeze”; Svan *qʷgən-*, *qʷəgən-* “to freeze”. KLIMOV (1964: 212) *\*qʷin-*; SCHMIDT (1962: 141).

- B. Afroasiatic: East Cushitic: Somali *qandood-* “to shiver”. Proto-Southern Cushitic *\*kʷantʷ-* “chill, chilliness” > Alagwa *qantsa* “rainy season”. EHRET (1980: 331).

- C. Dravidian: Kolami *kinani*, *kinām* “cold”, Gondi *kinan*, *kīnd* “cold”, *kinnān* “wet, cool”, *kinnita* “cold”. BURROW - EMENEAU (1984: 147, no. 1601).

BUCK 1949: 15.86 cold.

#### 630. Proto-Nostratic *\*gin-/gen-* “to be young, small, weak”:

- A. Afroasiatic: Egyptian *gnn* “to be weak, soft”, *gnnw* “weakness” (?); Coptic *čnon* “to become soft, smooth, weak”. FAULKNER (1962: 290); ERMAN - GRAPOW (1921: 198); VYČIHL (1983: 342); ČERNÝ (1976: 332).

- B. Dravidian: Toda *kin* “small”; Kannaḍa *kiṇkini beraḷu* “little finger”; Koḍagu *kiṇṇē* “boy”; Tuḷu *kinni* “small, young; the young of an animal, smallness”, *kinyavu* “the young of an animal, a little thing”, *kinyappē* “mother’s younger sister”, *kinyamme* “father’s younger brother”, *kinkana*,

*kin̄kaṇa* “a little”, *kin̄yuru*, *kin̄aru*, *kinalu* “a bit, trifle”; Koraga *kinnige* “younger one”, *kin̄yo* “small”. BURROW - EMENEAU (1984: 147, no. 1603).

- C. Sumerian *gen* “small”, *genna* “child”, *genna* “young, small”, *gina* “heir, child, son”, *gina* “small, weak”, *ginna* “child”. (Sumerian loan-word in Akkadian *ginū* “infant, child”).

BUCK 1949: 4.82 weak; 12.56 small, little; 14.14 young.

### 17. New Material to be Added to Existing Etymologies

313. Proto-Nostratic *\*gʷan-/gʷən-* “to swell, to abound”:  
Kartvelian: Svan *gun* “very; plenty of”.
492. Proto-Nostratic *\*wir-/wer-* “to say, to speak, to tell, to point out, to make known”:  
Afroasiatic: Egyptian (Demotic) *wṣḥ* “message, matter, news”;  
Coptic *wō* “news, report”. VYČIHL (1983: 230); ČERNÝ (1976: 210).
494. Proto-Nostratic *\*waʎ-/wəʎ-* “to blaze, to shine, to be bright”:  
Afroasiatic: Southern Cushitic: Proto-Rift *\*welah-* “to appear, to emerge into view” > Iraqw *welahat-* “to appear, to emerge into view”; K’wadza *wilit-* “to come out of hiding”. EHRET (1980: 383).
541. Proto-Nostratic *\*manʷ-/mənʷ-* “to lust after, to desire passionately, to copulate, to have sexual intercourse, to beget”:  
Dravidian: Tamil *māṇi* “penis”; Malayalam *māṇi* “penis”; Kannaḍa *māṇi* “penis”. BURROW - EMENEAU (1984: 427, no. 4805).

### 18. The Following Etymology Should be Replaced

311. Proto-Nostratic *\*kʷun-/kʷon-* “to bend or fold together, to crack, to split, to divide” should be replaced by Proto-Nostratic *\*kʷun-/kʷon-* “to bend, to bow; to bend or fold (together); to crack, to split; to tie or bind together” on the basis of the following:
- A. Proto-Indo-European (*\*kʷen-/kʷon-/kʷn-* “to bend; to bend or fold (together); to crack, to split; to tie or bind together”: Greek γνάπτω “to bend”; German *knicken* “to crease, to bend, to fold, to crack, to break, to split, to snap, to burst”; Old Icelandic *kneikja* “to bend backwards with force”, *knytja* “to knit or tie together”, *knýta* “to knit, to fasten by a knot, to bind, to tie”; Old English *cnyttan* “to tie”, *cnyttels* “string, sinew”. POKORNY (1959: 370-373) *\*gen-* “to press together, to compress”; WALDE (1927-1932: I, 580-583) *\*gen-*; MANN (1984-1987: 284) *\*gnabh-* “to bend, to twist”, 284 *\*gnabh̄alos, -om* (*\*gnabh̄ilo-*) “twist, strainer, tensile instrument”, 284 *\*gnabh̄jō* “to bend, to strain”; WATKINS (1985: 19) *\*gen-* “to compress into a ball”.



- B. Proto-Kartvelian *\*k'on-* "to tie or bind together": Georgian *k'on-va* "to wrap, to tie together, to bind up", *k'on-a* "bundle, bunch"; Mingrelian *k'uno* (< *\*k'ono*) "creel"; Svan *li-č'oni* "to wrap up". SCHMIDT (1962: 120); KLIMOV (1964: 114) *\*k'on-*.
- C. Proto-Afroasiatic *\*k'an-/k'an-* "to bend, to bow; to be bent, curved, crooked": Semitic: Arabic *ḵaniya* "to be hooked, aquiline (nose)", *ʾaḵnā* "bent, curved, crooked, hooked". Egyptian *qnb* "to bend, to bow, to incline (oneself); to subjugate", *qnbt* "corner, angle", *qni* "sheaf, bundle"; Coptic *knaaw* "sheaf" (< *qniw*). FAULKNER (1962: 279 and 280); VYČIHL (1983: 83); ČERNÝ (1976: 60).
- D. Dravidian: Tamil *kūn* "bend, curve, hump on the back, humpback, snail", *kūnu* (*kūni-*) "to curve, to become crooked, to bend down, to become hunch-backed", *kūṇal* "bend, curve, hump", *kūṇan* "humpback", *kuṇi* (-v-, -nt-) "to bend (as a bow), to bow, to stoop", *kuṇi* (-pp-, -tt-) "to bend (tr.), to stoop", *kuṇi* "curvature, bow (weapon)"; Malayalam *kūnuka* "to stoop, to be crookbacked", *kuni* "semicircle, curve", *kuniyuka* "to bow, to stoop, to bend", *kunikka* "to make a curve, to cause to stand stooping"; Kannada *kūn* (*kūnt-*), *kūnu* "to be bent or bowed, to bend, to stoop; (n.) a hump", *kunuṅgu* "to bend, to stoop, to crouch, to contract oneself, to shrivel up"; Gondi *gun-* "to bend". BURROW - EMENEAU (1984: 175, no. 1927).
- BUCK 1949: 9.14 bend (vb. tr.); 9.15 fold (vb. tr.); 9.16 bind (vb. tr.); 10.14 wind, wrap (vb.); 12.74 crooked.

## REFERENCES

- ADRADOS, Francisco R. 1989. "Agglutination, Suffixation or Adaptation? For the History of Indoeuropean Nominal Inflection". *Indogermanische Forschungen* 97. 1-28.
- AUSTERLITZ, Robert. 1968. "L'ouralien". In: André MARTINET (éd.), *Le langage*, 1331-1387. Paris: Gallimard.
- BERGSTRÄSSER, Gotthelf. 1983. *Introduction to the Semitic Languages: Text Specimens and Grammatical Sketches*. Translated with notes and bibliography by Peter T. DANIELS. Winona Lake, IN: Eisenbrauns.
- BIRNBAUM, Henrik. 1977. *Linguistic Reconstruction: Its Potentials and Limitations in New Perspective*. Washington, DC: Journal of Indo-European Studies.
- BLAŽEK, Václav. 1992a. "Kartvelian Material in Nostratic Lexicon: New Etymologies". In: Vitaly SHEVOROSHKIN (ed.), *Nostratic, Dene-Caucasian, Austric and Amerind*, 112-128. Bochum: Brockmeyer.
- . 1992b. "Kartvelian Material in Nostratic Lexicon: New Etymologies II". In: Vitaly SHEVOROSHKIN (ed.), *Nostratic, Dene-Caucasian, Austric and Amerind*, 129-148. Bochum: Brockmeyer.
- . 1992c. "Some Nostratic Etymologies". In: Vitaly SHEVOROSHKIN (ed.), *Nostratic, Dene-Caucasian, Austric and Amerind*, 245-265. Bochum: Brockmeyer.

- BOISSON, Claude. 1987a. "Quelques ressemblances lexicales entre sumérien et dravidien". Manuscript.
- . 1987b. "A Conjecture on the Linguistic Affiliation of Sumerian". Manuscript.
- . 1989b. "Contraintes typologiques sur le système phonologique du sumérien." *Bulletin de la Société de Linguistique de Paris* 84/1. 201-233.
- . 1992. "The Sumerian Pronominal System in a Nostratic Perspective". In: Vitaly SHEVOROSHKIN (ed.), *Nostratic, Dene-Caucasian, Austric and Amerind*, 433-461. Bochum: Brockmeyer.
- BOMHARD, Allan R. 1984. *Toward Proto-Nostratic: A New Approach to the Comparison of Proto-Indo-European and Proto-Afroasiatic* (= *Current Issues in Linguistic Theory*, vol. 27). Amsterdam: Benjamins.
- . 1986. "Common Indo-European/Afroasiatic Roots: Supplement 1". *General Linguistics* 26. 225-257.
- . 1988a. "The Prehistoric Development of the Athematic Verbal Endings in Proto-Indo-European". In: Yoël L. ARBITMAN (ed.), *A Linguistic Happening in Memory of Benjamin Schwartz*, 475-488. Louvain-la-Neuve: Publications Linguistiques de Louvain.
- . 1988b. "Recent Trends in the Reconstruction of the Proto-Indo-European Consonant System". *Historische Sprachforschung* 101. 2-25.
- . 1988c. "The Reconstruction of the Proto-Semitic Consonant System". In: Yoël L. ARBITMAN (ed.), *FUCUS: A Semitic/Afrasian Gathering in Remembrance of Albert Ehrman*, 113-140. Amsterdam / Philadelphia, PA: Benjamins.
- . 1990. "A Survey of the Comparative Phonology of the So-Called 'Nostratic Languages'." In: Philip BALDI (ed.), *Linguistic Change and Reconstruction Methodology*, 331-358. The Hague: Mouton de Gruyter.
- . 1991. "Lexical Parallels between Proto-Indo-European and Other Languages". In: Lambert ISEBAERT (ed.), *Studia Etymologica Indoeuropaea: Memoriae A. J. Van Windekens (1915-1989) Dicata*, 47-106. Leuven: Peeters.
- . 1992a. "Distant Linguistic Comparison and the Nostratic Hypothesis". *FAIES Newsletter* II/1 (March 1992).
- . 1992b. "The Nostratic Macrofamily (with Special Reference to Indo-European)". *Word* 43. 61-83.
- . 1993. "Linguistic Methodology and Distant Linguistic Comparison". *Mother Tongue* 20. 1-4.
- BOMHARD, Allan R. - KERNS, John C. 1994. *The Nostratic Macrofamily: A Study in Distant Linguistic Relationship*. Berlin, New York, NY, and Amsterdam: Mouton de Gruyter.
- BRUGMANN, Karl. 1904. *Kurze vergleichende Grammatik der indogermanischen Sprachen*. Berlin: Walter de Gruyter. [Reprinted 1970.]
- BUCK, Carl Darling. 1949. *A Dictionary of Selected Synonyms in the Principal Indo-European Languages*. Chicago, IL: University of Chicago Press.
- BURROW, Thomas. 1973. *The Sanskrit Language*. 3rd edition. London: Faber and Faber.
- BURROW, Thomas - EMENEAU, Murray B. 1984. *Dravidian Etymological Dictionary*. 2nd edition. Oxford: Oxford University Press.

- CALDWELL, Robert. 1913. *A Comparative Grammar of the Dravidian or South Indian Family of Languages*. 3rd edition revised and ed. by J. L. WYATT and T. Ramakrishna PILLAI. Reprinted 1974. New Delhi: Oriental Reprint Corporation.
- ČERNÝ, J. 1976. *Coptic Etymological Dictionary*. Cambridge: Cambridge University Press.
- COHEN, David. 1968. "Langues chamito-sémitiques". In: André MARTINET (ed.), *Le langage 1288-1330*. Paris: Gallimard.
- COHEN, Marcel. 1947. *Essai comparatif sur le vocabulaire et la phonétique du chamito-sémitique*. Reprinted 1969. Paris: Honoré Champion.
- COLLINDER, Björn. 1957. *A Survey of the Uralic Languages*. Uppsala: Almqvist and Wiksell.
- . 1960. *A Comparative Grammar of the Uralic Languages*. Uppsala: Almqvist and Wiksell.
- . 1965. *An Introduction to the Uralic Languages*. Berkeley and Los Angeles, CA: University of California Press.
- . 1977. *Fenno-Ugric Vocabulary. An Etymological Dictionary of the Uralic Languages*. 2nd revised edition. Uppsala: Almqvist and Wiksell.
- COMRIE, Bernard (ed.). 1981. *The Languages of the Soviet Union*. Cambridge: Cambridge University Press.
- CUNY, Albert. 1946. *Invitation à l'étude comparative des langues indo-européennes et des langues chamito-sémitiques*. Bordeaux: Bière.
- DÉCSY, Gyula. 1965. *Einführung in die finnisch-ugrische Sprachwissenschaft*. Wiesbaden: Harrassowitz.
- . 1990. *The Uralic Protolanguage: A Comprehensive Reconstruction*. Bloomington, IN: Eurolingua.
- DIAKONOFF, Igor M. 1965. *Semito-Hamitic Languages*. Moscow: Nauka.
- . 1975. "On Root Structure in Proto-Semitic". In: James BYNON - Theodora BYNON (eds.), *Hamito-Semitic*, 133-153. The Hague: Mouton.
- . 1984. Letter to the Conference regarding recent work in the USSR on the comparative historical vocabulary of Afrasian. In: James BYNON (ed.), *Current Progress in Afro-asiatic Linguistics: Papers from the Third International Hamito-Semitic Congress*, 1-10. Amsterdam: Benjamins.
- . 1988. *Afrasian Languages*. Moscow: Nauka.
- . 1992. *Proto-Afrasian and Old Akkadian: A Study in Historical Phonetics*. (= *Journal of Afroasiatic Languages* 4: 1/2). Princeton, NJ: Institute of Semitic Studies.
- DOLGOPOLSKY [DOLGOPOL'SKIĬ], Aaron. 1973. *Sravnitel'no-istoričeskaja fonetika kušitskix jazykov [An Historical-Comparative Phonology of the Cushitic Languages]*. Moscow: Nauka.
- . 1984. "On Personal Pronouns in the Nostratic Languages". In: Otto GSCHWANTLER - Károly RÉDEI - Hermann REICHERT (eds.), *Linguistica et Philologica. Gedenkschrift für Björn Collinder (1894-1983)*, 65-112. Vienna: Braumüller.
- . 1989. "Problems of Nostratic Comparative Phonology (Preliminary Report)". In: Vitaly SHEVOROSHKIN (ed.), *Reconstructing Languages and Cultures*, 90-98. Bochum: Brockmeyer.

- . 1992. "The Nostratic Vowels in Indo-European". In: Vitaly SHEVOROSHKIN (ed.), *Nostratic, Dene-Caucasian, Austric and Amerind*, 298-331. Bochum: Brockmeyer.
- EHRET, Christopher. 1980. *The Historical Reconstruction of Southern Cushitic Phonology and Vocabulary*. Berlin: Reimer.
- . 1989a. *A Reconstruction of Proto-Afroasiatic*. Manuscript.
- . 1989b. "The Origin of Third Consonants in Semitic Roots: An Internal Reconstruction (Applied to Arabic)". *Journal of Afroasiatic Languages* 2/2. 109-202.
- ERMAN, Adolf - GRAPOW, Hermann. 1921. *Ägyptisches Handwörterbuch*. Hildesheim: Olms. [Reprinted 1981.]
- . 1926-1963. *Wörterbuch der ägyptischen Sprache*. 7 volumes in 13 parts. Berlin: Akademie Verlag. [Reprinted 1992.]
- ERNOUT, Alfred - MEILLET, Antoine. 1979. *Dictionnaire étymologique de la langue latine: Histoire des mots*. 4th edition. Paris: Klincksieck.
- FÄHNRIK, Heinz. 1994. *Grammatik der altgeorgischen Sprache*. Hamburg: Buske.
- FAULKNER, Raymond O. 1962. *A Concise Dictionary of Middle Egyptian*. Oxford: Oxford University Press.
- FEIST, Sigmund. 1939. *Vergleichendes Wörterbuch der gotischen Sprache*. 3rd edition. Leiden: Brill.
- FRISK, Hjalmar. 1970-1973. *Griechisches etymologisches Wörterbuch*. 3 vols. Heidelberg: Winter.
- GAMKRELIDZE, Thomas V. 1966. "A Typology of Common Kartvelian". *Language* 42.69-83.
- . 1967. "Kartvelian and Indo-European: A Typological Comparison of Reconstructed Linguistic Systems". *To Honor Roman Jakobson*, vol. I, 707-717. The Hague: Mouton.
- GAMKRELIDZE, Thomas V. - IVANOV, Vjačeslav V. 1984. *Indoeuropejskij jazyk i indoevropejcy: Rekonstrukcija i istoriko-tipologičeskij analiz prajazyka i protokul'tury (Indo-European and the Indo-Europeans: A Reconstruction and Historical Typological Analysis of a Protolanguage and a Proto-Culture)*. 2 vols. Tbilisi: Publishing House of the Tbilisi State University.
- GAMKRELIDZE, Thomas V. - MACHAVARIANI, Givi. 1982. *Sonantsystem und Ablaut in den Kartwelsprachen. Eine Typologie der Struktur des Gemeinkartwelischen*. Tübingen: Narr.
- GEORGIEV, Vladimir. 1981. *Introduction to the History of Indo-European Languages*. 3rd edition. Sofia: Bulgarian Academy of Sciences.
- GREENBERG, Joseph H. 1957. *Essays in Linguistics*. Chicago, IL: University of Chicago Press.
- . 1987. *Language in the Americas*. Stanford, CA: Stanford University Press.
- . 1990. "The Prehistory of the Indo-European Vowel System in Comparative and Typological Perspective". In: Vitaly SHEVOROSHKIN (ed.), *Proto-Languages and Proto-Cultures*, 77-136. Bochum: Brockmeyer.
- HAJDÚ, Péter. 1976. *Finno-Ugrian Languages and Peoples*. Translated and adapted by G. F. CUSHING. London: Deutsch.

- HINZ, Walther - KOCH, Heidemarie. 1987. *Elamisches Wörterbuch*. 2 vols. Berlin: Reimer.
- HODGE, Carleton T. (ed.). 1981. *Afroasiatic: A Survey*. The Hague: Mouton.
- HOPPER, Paul J. 1973. "Glottalized and Murmured Occlusives in Indo-European". *Glossa* 7.141-166.
- HÜBNER, Barbara - REIZAMMER, Albert. 1985-1986. *Inim Kiengi II. Sumerisch-deutsches Glossar*. 2 vols. Marktredwitz: Selbstverlag Dipl.-Ing. Univ. Albert Reizammer.
- HUDSON, Grover. 1989. *Highland East Cushitic Dictionary*. Hamburg: Buske.
- ILLIČ-SVITYČ, V[ladislav] M[arkovič]. 1965. "Materialy k sravnitel'nomu slovarju nostratičeskix jazykov (indoevropskij, altajskij, ural'skij, dravidskij, kartvel'skij, semito-xamitskij)" ("Materials for a Comparative Dictionary of the Nostratic Languages [Indo-European, Altaic, Uralic, Dravidian, Kartvelian, Hamito-Semitic]"). *Ėtimologija* 1965.321-373.
- . 1971- . *Opyt sravnenija nostratičeskix jazykov (semitoxamitskij, kartvel'skij, indoevropskij, ural'skij, dravidskij, altajskij)* (*An Attempt at a Comparison of the Nostratic Languages [Hamito-Semitic, Kartvelian, Indo-European, Uralic, Dravidian, Altaic]*). 3 vols. Moscow: Nauka.
- JOKI, Aulis J. 1973. *Uralier und Indogermanen: Die älteren Berührungen zwischen den uralischen und indogermanischen Sprachen*. Helsinki: Suomalais-Ugrilainen Seura.
- KERNS, John C. 1985. *Indo-European Prehistory*. Cambridge: Heffer and Sons.
- KLIMOV, G. V. 1964. *Ėtimologičeskij slovar' kartvel'skix jazykov*. Moscow: Nauka.
- . 1991. "Some Thoughts on Indo-European-Kartvelian Relations." *Journal of Indo-European Studies* 19. 323-341.
- KOSKINEN, Kalevi E. 1980. *Nilal: Über die Urverwandtschaft des Hamito-Semitischen, Indogermanischen, Uralischen und Altaischen*. Helsinki: Aka-teeminen Kirjakauppa.
- KRONASSER, Heinz. 1966. *Etymologie der hethitischen Sprache*. Band 1. Wiesbaden: Harrassowitz.
- LAMB, Sydney M. - MITCHELL, E. Douglas (eds.) 1991. *Sprung from Some Common Source. Investigations into the Prehistory of Languages*. Stanford, CA: Stanford University Press.
- LEHMANN, Winfred P. 1986b. *A Gothic Etymological Dictionary*. Leiden: Brill.
- . 1993. *Theoretical Bases of Indo-European Linguistics*. London, Boston, MA, Melbourne, and Henley: Routledge.
- LESLAU, Wolf. 1987. *Comparative Dictionary of Ge'ez*. Wiesbaden: Harrassowitz.
- MANN, Stuart E. 1984-1987. *An Indo-European Comparative Dictionary*. Hamburg: Buske.
- MARLOW, Elli Johanna Pudas. 1974. *More on the Uralo-Dravidian Relationship: A Comparison of Uralic and Dravidian Etymological Vocabularies*. Ph.D. dissertation, University of Texas at Austin.
- MARTINET, André. 1975 [1953]. "Remarques sur le consonantisme sémitique". *Évolution des langues et reconstruction*, by André MARTINET, 248-261. Paris: Presses Universitaires de France.

- MAYRHOFER, Manfred. 1956-1980. *Kurzgefaßtes etymologisches Wörterbuch des Altindischen*. 4 volumes. Heidelberg: Winter.
- MCALPIN, David W. 1981. *Proto-Elamo-Dravidian: The Evidence and Its Implications*. Philadelphia, PA: American Philosophical Society.
- MEILLET, Antoine. 1964. *Introduction à l'étude comparative des langues indo-européennes*. University, AL: University of Alabama Press. [Reprint of 8th edition (1937).]
- MENGES, Karl H. 1968. *The Turkic Languages and Peoples*. Wiesbaden: Harrassowitz.
- MÖLLER, Hermann. 1911. *Vergleichendes indogermanisch-semitisches Wörterbuch*. Göttingen: Vandenhoeck and Ruprecht. [Reprinted 1970.]
- MOSCATI, Sabatino (ed.). 1964. *An Introduction to the Comparative Grammar of the Semitic Languages*. Wiesbaden: Harrassowitz.
- MURTONEN, A. 1989. *Hebrew in its West Semitic Setting*. Leiden: Brill.
- PEDERSEN, Holger. 1931. *The Discovery of Language: Linguistic Science in the Nineteenth Century*. English translation by John Webster SPARGO. Midland book edition 1962. Bloomington, IN: Indiana University Press.
- PETRÁČEK, Karel. 1982. "La racine en indoeuropéen et en chamito-sémitique et leurs perspectives comparatives". *Istituto Orientale di Napoli, Annali* 42.381-402.
- POKORNY, Julius. 1959. *Indogermanisches etymologisches Wörterbuch*. Bern/Munich: Francke.
- POPPE, Nicholas. 1955. *Introduction to Mongolian Comparative Studies*. Reprinted 1987. Helsinki: Suomalais-Ugrilainen Seura.
- . 1960. *Vergleichende Grammatik der altaischen Sprachen. Teil 1: Vergleichende Lautlehre*. Wiesbaden: Harrassowitz.
- . 1965. *Introduction to Altaic Linguistics*. Wiesbaden: Harrassowitz.
- PORXOMOVSKY, V. Ja. (ed.). 1987. *Afrikanskoe istoričeskoe jazykoznanie: problemy rekonstrukcii* [African Historical Linguistics: Problems of Reconstruction]. Moscow: Nauka.
- PUHVEL, Jaan. 1984-. *Hittite Etymological Dictionary*. Berlin/New York/Amssterdam: Mouton de Gruyter.
- RAMSTEDT, G. J. 1952-1957. *Einführung in die altaische Sprachwissenschaft*. 2 vols. Helsinki: Suomalais-Ugrilainen Seura.
- RASMUSSEN, Jens E. 1987. "The Make-Up of Indo-European Morphology". *Diachronica* 4. 107-122.
- RÉDEI, Károly (ed.). 1986-1988. *Uralisches etymologisches Wörterbuch*. Wiesbaden: Harrassowitz.
- RUHLEN, Merritt. 1987. *A Guide to the World's Languages*. Stanford, CA: Stanford University Press.
- . 1994. *The Origin of Language: Tracing the Evolution of the Mother Tongue*. New York, NY: Wiley & Sons.
- SASSE, Hans-Jürgen. 1979. *The Consonant Phonemes of Proto-East Cushitic (PEC): A First Approximation* (= *Afroasiatic Linguistics* 7/1). Malibu, CA: Undena Publications.
- . 1982. *An Etymological Dictionary of Burji*. Hamburg: Buske.
- SCHMIDT, Karl Horst. 1962. *Studien zur Rekonstruktion des Lautstandes der südkaukasischen Grundsprache*. Wiesbaden: Steiner.

- SHEVOROSHKIN, Vitaly (ed.). 1989a. *Explorations in Language Macrofamilies*. Bochum: Brockmeyer.
- (ed.). 1989b. *Reconstructing Languages and Cultures*. Bochum: Brockmeyer.
- (ed.). 1990. *Proto-Languages and Proto-Cultures*. Bochum: Brockmeyer.
- (ed.). 1991. *Dene-Sino-Caucasian Languages*. Bochum: Brockmeyer.
- SHEVOROSHKIN, Vitaly - MARKEY, Thomas L. (eds.). 1986. *Typology, Relationship, and Time*. Ann Arbor, MI: Karoma Publishers.
- SCHWINK, Frederick W. 1994. *Linguistic Typology, Universality and the Realism of Reconstruction*. Washington, DC: Institute for the Study of Man.
- SINOR, Denis (ed.). 1988. *The Uralic Languages. Description, History and Foreign Influences*. Leiden: Brill.
- STAROSTIN, Sergej A. 1991. *Altajskaja problema i proisxoždenie japonskogo jazyka* [The Altaic Problem and the Origin of the Japanese Language]. Moscow: Nauka.
- STREET, John. 1974. *On the Lexicon of Proto-Altaic: A Partial Index of Reconstructions*. Madison, WI: The Author.
- STURTEVANT, Edgar H. 1951. *A Comparative Grammar of the Hittite Language*. Vol. I. New Haven, CT: Yale University Press. [Revised edition.]
- SZEMERÉNYI, Oswald. 1990. *Einführung in die vergleichende Sprachwissenschaft*. 4th edition. Darmstadt: Wissenschaftliche Buchgesellschaft.
- THOMSEN, Marie-Louise. 1984. *The Sumerian Language*. Copenhagen: Akademisk Forlag.
- TYLER, Stephen A. 1968. "Dravidian and Uralian: The Lexical Outlook". *Language* 44/4.798-812.
- VAN WINDEKENS, Albert Joris. 1976-1982. *Le tokharien confronté avec les autres langues indo-européennes*. 3 vols. Louvain: Centre International de Dialectologie Générale.
- VYČIHL, Werner. 1983. *Dictionnaire étymologique de la langue copte*. Louvain: Peeters.
- WALDE, Alois. 1927-1932. *Vergleichendes Wörterbuch der indogermanischen Sprachen*. Revised and ed. by Julius POKORNY. 3 vols. [Reprinted 1973.] Berlin: de Gruyter.
- WALDE, Alois - HOFMANN, Johann Baptist. 1938-1956. *Lateinisches etymologisches Wörterbuch*. Heidelberg: Winter.
- ZVELEBIL, Kamil. 1970. *Comparative Dravidian Phonology*. The Hague: Mouton.

Boston, MA.

Allan R. BOMHARD.